[illegible], V.S., kand.tekhn.nauk

Methods and [illegible] for measuring the deviation of plane surfaces of the parts of ship mechanisms from a straight line and a horizontal plane. Sudostroenie no.6:28-29 Je '63.

(MIRA 16:8)

[illegible], T. V., PATRIINA, E. A., KRAVCHENKO, V. V.

Ascorbic Acid

Chromatographic determination of ascorbic acid in plant fluids, Biokhimiia, 16, no. 6, 1951. Kafedra Biokhimii Stanislavskogo Gosudarstvennogo Med.nstituta.

Rcd. 10 Feb. 1951.

SO: Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.

KRAVCHENKO, V.V.

Increasing the sensitivity of the salting out method in determining ethyl alcohol in cadaver material. Sud.-med. ekspert. 5 no.1:38-44 Ja-Mr '62. (MIRA 15:4)

1. Stanislavskoye oblastnoye byuro sudebnomeditsinskoy ekspertizy (nachal'nik G.M.Pal'mova).
(ETHYL ALCOHOL) (AUTOPSY)

KRAVCHENKO, V.V.

Connection of wire broadcasting bays to the code circuit of the centralized traffic control system. Avtom. telem. i sviaz' 8 no.2:19-22 F '64. (MIRA 17:6)

1. Starshiy inzh. otdela signalizatsii, tsentralizatsii i blokirovki sluzhby signalizatsii i svyazi Severo-Kavkazskoy dorogi.

KOSHITS, Yu.I.; VELIKA, Z.R.[Velyka, Z.R.]; RAYKO, V.I.[Raiko, V.I.]; ONISHCHENKO, M.Yu.[Onyshchenko, M.IU.]; BUTSENKO, M.A.; KRAVCHENKO, V.Ya., red.; SLYN'KO, B.I., red.; GRISHKO, T.I. [Hryshko, T.I.], tekhn. red.

[Buildings on livestock farms] Budivli tvarynnyts'kykh ferm; budivel'na i proektna praktyka. Za red. V.IA.Kravchenka. Kyiv, Derzhbudvydav URSR, 1962. 89 p. (MIRA 16:5)

1. Akademiya budivnytstva i arkhitektury URSR. Naukovo-doslidnyi instytut arkhitektury sporud.
(Farm buildings--Design and construction)

10.2000 24.4300, 24.2300

S/124/62/000/003/006/052
D237/D301

AUTHORS: Damburg, R.Ya., and Kravchenko, V.Ya.

TITLE: Behavior of hydromagnetic waves on the boundary of two media

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1962, 2, abstract 3B7 (Tr. In-ta fiz. AN LatSSR, 1959, 11, 129 - 141)

TEXT: The problem of the reflection and refraction of arbitrarily polarized hydromagnetic waves on the boundary of two ideal incompressible fluids of infinite conductivity, was studied by P.H. Roberts (Astrophys. Journal 1955, 121). However, by using a false assumption about the immobility of the boundary, he obtained the incorrect results for amplitude relations of the incident, reflected and refracted waves. This work aims to correct the errors of P.H. Roberts and to study the problem of the passage of hydromagnetic waves through vacuum. It is also shown that in this case the methods of formal magnetic hydrodynamics gives the same results as the theory of two-component fluid. (A. Shlyuter. Probl. sovrem.

Card 1/2

Behavior of hydromagnetic waves on ... S/124/62/000/003/006/052
D237/D301

fiz. Sb. perev. i ooz. in. period. lit. 1956, no. 2). [Abstractor's note: Complete translation.]

Card 2/2

33260
S/668/61/000/012/004/004
B102/B138

26.2331 also 3100

AUTHORS: Kravchenko, V. Ya., Mikel'son, A. E.

TITLE: The problem of the free suspension of solid and liquid spheres in the field of finite solenoids

SOURCE: Akademiya nauk Latviyskoy SSR. Institut fiziki. Trudy. no. 12. 1961, 199 - 207

TEXT: The forces acting upon a metal sphere placed between solenoids were calculated and measured, and it is shown that the electromagnetic forces acting on a liquid can be simulated by solids. Such systems are used in melting of high-purity metals without a crucible. A-c pulses were supplied to the solenoids in such a way that the fields induced by them were oppositely directed. Interaction between these fields and the current induced in the sphere causes the sphere to hover between the coils. The condition for the free suspension of a sphere of mass m under the action of the electromagnetic force F is given by $F = mg \leqslant F_{max}$. F is determined theoretically for an idealized case of a sphere of conductivity σ in a circular

Card 1/4

The problem of the free ...

current field of frequency f, with nI ampere turns.

$$F_z = 4\pi^2\mu (nI)^2 \sum_{l=1}^{\infty} \frac{1}{l+1} (\sin\alpha)^{2l+3} \left(\frac{a}{b}\right)^{2l+1} P_l^1(\cos\alpha) \times$$

$$\times P_{l+1}^1(\cos\alpha) \left[1 - \frac{2l+1}{a\sqrt{\delta}} \operatorname{Re} \frac{\sqrt{-i}\, I_{l+\frac{1}{2}}(a\sqrt{i\delta})}{I_{l-\frac{1}{2}}(a\sqrt{i\delta})}\right]. \qquad (3)$$

is generally obtained, if the skin layer is infinitely thin ($\delta \to \infty$),

$$F_z \to 4\pi^2\mu (nI)^2 \sum_{l=1}^{\infty} \frac{1}{l+1} (\sin\alpha)^{2l+3} \left(\frac{a}{b}\right)^{2l+1} P_l^1(\cos\alpha) P_{l+1}^1(\cos\alpha). \qquad (4)$$

and if it is very thick ($\delta \to 0$),

$$F_z \to \frac{\pi^2}{2} \mu (nJ)^2 \delta^2 a^4 \sum_{l=1}^{\infty} \frac{1}{(l+1)\left(l+\frac{1}{2}\right)^2\left(l+\frac{3}{2}\right)\left(l+\frac{5}{2}\right)} \times$$

$$\times (\sin\alpha)^{2l+3} \left(\frac{a}{b}\right)^{2l+1} P_l^1(\cos\alpha) P_{l+1}^1(\cos\alpha). \qquad (5)$$

Card 2/4

The problem of the free ...

result. In dimensionless representation

$$\frac{4\pi F}{\mu n^2 I^2} = 16\pi^3 \sum_{l=1}^{\infty} \frac{1}{l+1} \left(\frac{a}{b}\right)^{2l+1} (\sin\alpha)^{2l+3} P_l^1(\cos\alpha) P_{l+1}^1(\cos\alpha) \times$$

$$\times \left[1 - \frac{2l+1}{a\sqrt{4\pi\omega\mu\sigma}} \operatorname{Re} \frac{\sqrt{-i}\, I_{l+\frac{1}{2}}(a\sqrt{4\pi i\omega\mu\sigma})}{I_{l-\frac{1}{2}}(a\sqrt{4\pi i\omega\mu\sigma})}\right]. \quad (6)$$

is valid and for α = const the behavior of the sphere in the field is describable by the dimensionless quantities: $\bar{F} = 4\pi F/\mu n^2 I^2$, $\bar{\omega} = 4\pi\omega\mu\sigma d^2$ and $\bar{d} = a/b$. Denotations: a and b - radii of sphere and current ring, respectively, P_1^1 - adjoint Legendre polynom, $I_{1+1/2}$ - modified Bessel function, $A_1 = 1/\left[\sqrt{i\delta}\, I_{1-1/2}(a\sqrt{i\delta})\right]$; $\delta = 4\pi\omega\mu\sigma$, $\omega = 2\pi f$, r - radius vector from the center of the sphere to any point of the sphere, α - angle between axis through sphere center and current loop and straight line joining sphere center with any point of the loop. The dimensionless quantities can be

Card 3/4

used for simulation. Measurements were carried out for Cu, Al, Sn and Pb at 50, 100, 200 and 8000 cps. From the numerical results tabulated it can be seen that (6) reaches a maximum for $\alpha = 60^{\circ}$. The theoretical values for $\bar{F}$ lie somewhat above the measured ones. The $\bar{F}(\bar{\omega})$ values for liquid and solid Na fit one curve and so do these values for Al, Cu, Sn and Pb. The latter curve lies above the first one. There are 4 figures, 2 tables, and 2 references: 1 Soviet and 1 non-Soviet.

S/181/62/004/007/011/037
B102/B104

AUTHOR: Kravchenko, V. Ya.

TITLE: Theory of nuclear spin-lattice relaxation in ionic crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 7, 1962, 1796 - 1802

TEXT: Nuclear spin relaxation in ideal ionic crystals is studied on the basis of a different mechanism from that used by Wikner and Das (Phys. Rev. 109, 369, 1958) or by Kochelayev (ZhETF, 37, 242, 1959) and better results are reached. An NaCl type crystal in which the ions vibrate about an equilibrium, so creating an alternating magnetic field, is considered. This field induces transitions of the nuclei from one spin state in the external homogeneous magnetic field to an other. The transition probability is calculated paying due regard to the acoustic and optical branches of the lattice vibrations (radiofrequency band). The lattice vibrations result from the deformation of the ion shells caused by the vibrations and the retardation in the electromagnetic interactions. The interaction between nuclear spin and the magnetic field of the vibrating ions is studied separately for acoustic and for optical vibrations. Explicit expressions are derived

Card 1/2

Theory of nuclear ...

for the single-phonon and two-phonon transition probabilities; they show that the interaction considered here is more effective than, e. g. the mechanisms studied by Waller (Z. Physik, 79, 370, 1932), Khutsishvili (ZhETF, 22, 382, 1952) or Purcell (Physica, 17, 282, 1951). Numerical estimates of the relaxation times showed them to be higher than the experimental values.

ASSOCIATION: Institut fiziki AN Latv. SSR (Institute of Physics, AS LatSSR)

SUBMITTED: February 5, 1962

ACCESSION NR: AP4011752 S/0181/64/006/001/0153/0163

AUTHORS: Vinetskiy, V. L.; Kravchenko, V. Ya.

TITLE: The theory of F centers

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 153-163

TOPIC TAGS: F center, quantum state, electron, polaron, defect, defect field, energy level, equidistant levels, Jacobian, adiabatic approximation, intermediate coupling, wave function, high mobility subsystem, low mobility subsystem, ground state, excited state

ABSTRACT: The authors have examined the quantum states of F centers in which an electron forms a polaron moving in the field of a defect. They have shown that the lowest state of such a system is characterized by a sequence of equidistant levels, but that excited states are characterized, beginning with some number, by a series of hydrogen-like terms. They have found the Jacobian of the Pekar transformation (S. I. Pekar, Issledovaniya po elektronnoy teorii kristallov, GITTL, M.-L., 1951), which is necessary for computing the matrix elements of the differential processes. It is concluded that the criterion of large-radius approximation is

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ACCESSION NR: AP4011752

better fulfilled the weaker the criterion of adiabatic approximation. Therefore, for a more precise definition of a polaron moving around a defect, one should use the approximation of a high-mobility intermediate coupling, in which the wave function of the high-mobility subsystem must approach expressions such as those used by the authors in the present work. Orig. art. has: 55 formulas.

ASSOCIATION: Institut fiziki AN UkrSSR,Kiyev (Institute of Physics AN UkrSSR); Institut fiziki AN LatvSSR, Riga (Institute of Physics AN LatvSSR)

SUBMITTED: 23May63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 000

Card 2/2

ACCESSION NR: AP4041712 S/0181/64/006/007/2075/2087

AUTHORS: Kravchenko, V. Ya.; Vinetskiy, V. L.

TITLE: Theory of paramagnetic relaxation of F centers in the case of hyperfine and spin-orbit interaction with the lattice

SOURCE: Fizika tverdogo tela, v. 6, no. 7, 1964, 2075-2087

TOPIC TAGS: paramagnetic relaxation, F center, hyperfine structure, spin orbit coupling, phonon, dipole interaction, wave function

ABSTRACT: The probability of one-phonon magnetic relaxation brought about by either spin-orbit or hyperfine (contact and dipole-dipole) interaction is calculated in the adiabatic approximation. Although general calculations of the F-center relaxation time due to spin-orbit interaction have not yet been made, in the case of one-phonon relaxation the calculations are possible, without resorting to any model, and without the need for knowledge of the F-center wave func-

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ACCESSION NR: AP4041712

tion. The relaxation times are expressed directly in terms of experimentally measured constants. General expressions are obtained for the matrix elements of the one-phonon transitions. The shortest contact relaxation time is equal to 3.6 x 10^9 $T^{-1}H^{-2}$ minutes (H -- magnetic field, T -- temperature). The spin-orbit relaxation time depends on the magnetic field direction and can be much larger, amounting to

$$1.9 \cdot 10^{18} T^{-1} \cdot H^{-4} \left(1 - 0.99 \sum_{\alpha} \frac{H_\alpha^4}{H^4}\right)^{-1}, \quad \alpha = x, y, z.$$

The results are analyzed and numerical calculations are made for the KCl crystal. The published experimental relaxation times for this salt vary with the impurity content, and the value given for the purest crystal (1350 sec) comes closest to the theoretically calculated 10^4 sec. "The authors thank M. F. Deygen for many useful discussions." Orig. art. has: 43 formulas.

Card 2/3

ACCESSION NR: AP4041712

ASSOCIATION: Institut fiziki tverdogo tela AN SSSR, (Moscow (Institute of Solid State Physics, AN SSSR)

SUBMITTED: 01Feb64 ENCL: 00

SUB CODE: NP NR REF SOV: 004 OTHER: 011

Card 3/3

L 8459-65 EWA(k)/FBD/EWT(l)/EWT(m)/EEC(k)-2/K/EEC(t)/T/EEC(b)-2/EWP(k)/EWP(q)/EWP(b)/EWA(m)-2/EWA(h) Pf-4/P1-4/P1-4/Pn-4/Po-4 IJP(c)/SSD/BSD/RAEM(a)/AFWL/ASD(a)-5/ASD(d)/AFETR/RAEM(e)/RAEM(i)/RAEM(c)/ESD(gs)/ESD(t)/RAEM(t)/AFTC(p) WG/
ACCESSION NR: AP4039584 WH/JD/JG S/0185/64/009/005/0570/0573

AUTHOR: Bayborodin, Yu. V.; Broude, V. L.; Kravchenko, V. Ya; Soskin, M. S. B

TITLE: On the possibility of obtaining a series of powerful single (giant) pulses with a Ruby Laser

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 5, 1964, 570-573

TOPIC TAGS: ruby laser, neodymium doped glass laser, laser, laser modulation, pulsed laser, giant pulse laser, laser pulse repetition frequency, laser output, laser pumping threshold, optical pumping

ABSTRACT: A method was found whereby the output pulse of a ruby laser could be broken up into a series of discrete powerful (giant) pulses with pulse repetition frequency PRF at least as great as 20kc/s. One of the disadvantages of ruby and neodymium-doped-glass lasers is the low PRF; complicated apparatus is necessary to achieve PRF's of even several cycles per second. Peak powers of these high PRF devices do not exceed 1-10 kw, and the output pulse is a nonperiodic "comb-structured" series that is inconvenient to work with. During the course of theoretical and experimental laser modulation investigations, a scheme became apparent which could yield PRF's up to several kc/s for only one flash of the pumping lamp. At

Card 1/2

the very moment following the first stimulated emission pulse, the impurities are still in a relatively highly excited state; pumping power only slightly above threshold is needed to produce a second stimulated emission pulse. The flash of the pumping lamp is of the order of a millisecond, and in this scheme a chopper is inserted into the resonant cavity to chop the pumping light at frequencies of 5, 10, and 20 kc/s. The oscillograms of enclosures 01 through 03 demonstrate the effect of chopping of the pumping light. Figure 1 of the Enclosure shows the pumping pulse. This and all other figures were obtained by attenuating the output intensity by a factor of 100 before detection with a photodetector. A 20 kc/s trane from an audiooscillator is likewise supplied below each trace for calibration. Figure 2, shows the normal ruby emission when no chopper is used. Figures 3, 4, and 5 show the output when the chopper is run at PRF's of 5, 10, and 20 kc/s, respectively. It can be seen that a PRF for giant pulses of 20 kc/s is by no means an upper limit. This method is not dependent on any particular property of a three-level laser because it is a general characteristic of a laser medium to remain excited to about threshold just after the first emission. This method of controlling PRF's will be valuable in the study of the kinetics of laser emission. Orig. art. has: 5 figures.

L 8459-65
ACCESSION NR: AP4039584

ASSOCIATION: Instytut Fizyky AN UkrSSR, Kiev (Institute of Physics, AN UkrSSR)

SUBMITTED: 24Jan64 ENCL: 05 SUB CODE: EC

NO REF SOV: 001 OTHER: 004

Card 3/6

L 11958-65 EWA(k)/EWT(1)/EEC(k)-2/T/EEC(b)-2/EWP(k)/EWA(m)-2 Po-4/Pf-4/
Pi-4/Pl-4 IJP(c) WG/JHB
ACCESSION NR: AP4046406 S/0056/64/047/003/0902/0913

AUTHORS: Vinetskiy, V. L.; Kravchenko, V. Ya.

TITLE: Adiabatic approximation in the theory of spin lattice interaction of local electronic centers in nonmetallic crystals

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 3, 1964, 902-913

TOPIC TAGS: spin lattice interaction, adiabatic approximation, hyperfine interaction constant, electronic center

ABSTRACT: The authors carry out a consistent and uniform calculation of the hyperfine interaction constants (A_k, B_k), the g-value shift (Δg), and the spin-orbit relaxation time (τ) for single-electron centers in nonmetallic crystals, where the ground state of the local electronic centers is sufficiently removed in energy from the nearest excited state. The approach employed differs from that used by

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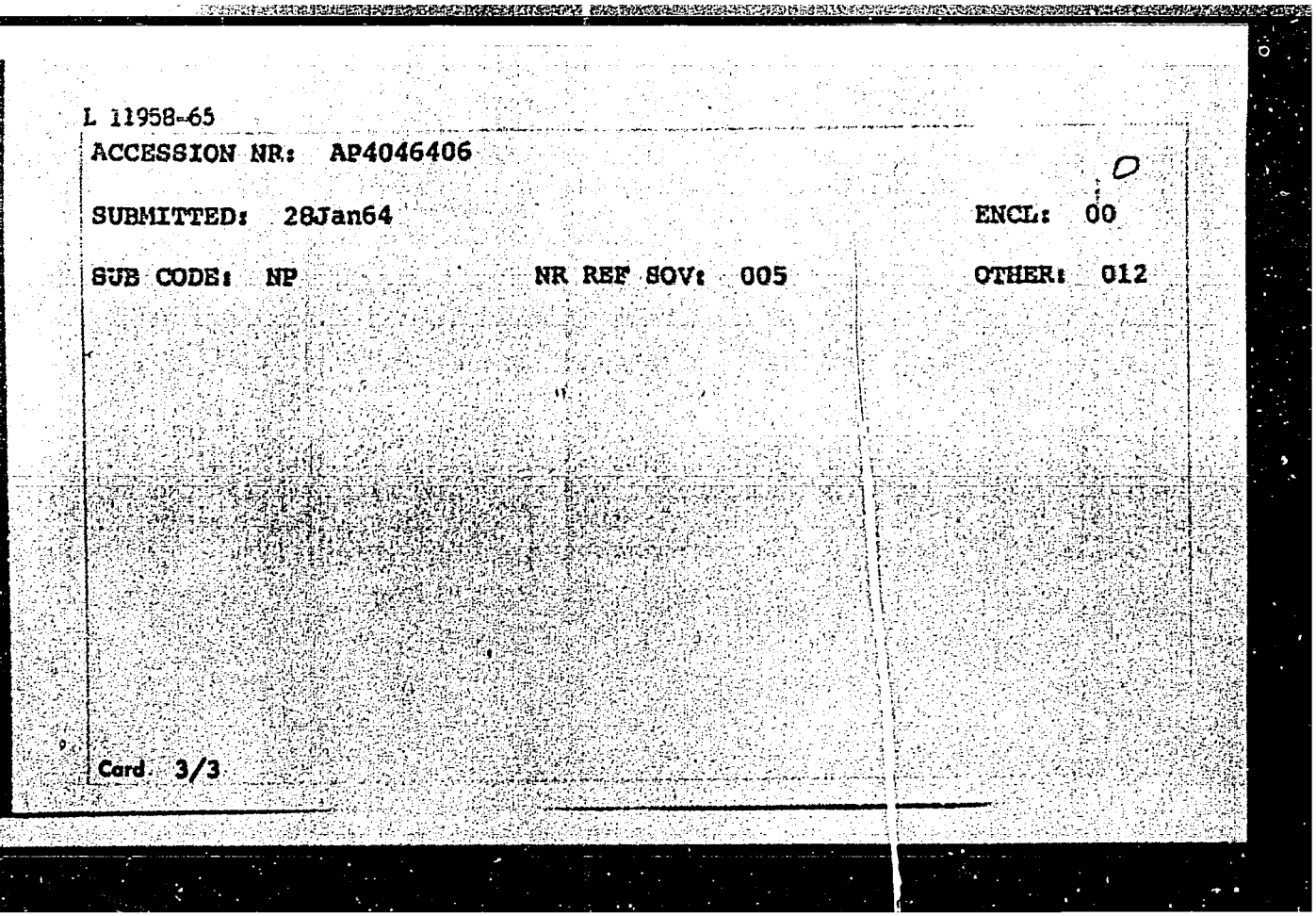
others in that the wave function of the unperturbed Hamiltonian is determined with the aid of the adiabatic approximation of Born and Huang (Dynamical Theory of Crystal Lattices, Oxford, 1954), in the form of an expansion in powers of a small parameter. By expanding also the perturbation operators in powers of the same parameter, it is possible to take successive account of all the terms of equal order of smallness in the matrix elements of the perturbation. The corrections to the electron-vibrational wave functions are then expressed in terms of the zeroth approximation function, which is contained under the integral sign in the final expressions for the unknown quantities. Orig. art. has: 36 formulas.

ASSOCIATION: Institut fiziki Akademii nauk Ukrainskoy SSR (Institute of Physics, Academy of Sciences UkrSSR); Institut fiziki tverdogo tela Akademii nauk SSSR (Institute of Solid State Physics, Academy of Sciences SSSR)



L 11958-65
ACCESSION NR: AP4046406

SUBMITTED: 28Jan64 ENCL: 00

SUB CODE: NP NR REF SOV: 005 OTHER: 012

Card 3/3

VINETSKIY, V.L.; KRAVCHENKO, V.Ya.

Adiabatic approximation in the theory of spin-lattice interaction between local electron centers in nonmetallic crystals. Zhur. eksp. i teor. fiz. 47 no.3:902-913 S '64. (MIRA 17:11)

1. Institut fiziki AN UkrSSR i Institut fiziki tverdogo tela AN SSSR.

KRAVCHENKO, V.Ya.; VINETSKIY, V.L.

Theory of the paramagnetic relaxation of F-centers in hyperfine and spin-orbital interaction with the lattice. Fiz. tver. tela 6 no.7: 2075-2087 Jl '64. (MIRA 17:10)

1. Institut fiziki tverdogo tela AN SSSR, Moskva.

L 24920-65 EEC(b)-2/EEC(k)-2/EWA(k)/EWP(k)/EWT(1)/T/EWA(m)-2 Pf-4/P1-4/P1-4/Po-4

ACCESSION NR: AP5003406 IJP(c) JHB/WG S/0181/65/007/001/0003/0011

35
33
B

AUTHORS: Kravchenko, V. Ya.; Vinetskiy, V. L.

21

TITLE: Two-phonon processes in spin-lattice relaxation of F-centers

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 3-11

TOPIC TAGS: F center, spin lattice relaxation, phonon, relaxation transition, hyperfine interaction, spin orbit interaction, relaxation time

ABSTRACT: A method developed by the authors previously (FTT v. 6, 2075, 1964; ZhETF v. 47, 902, 1964) is used to derive an expression for the probabilities of two-photon relaxation transitions of the F-center electron, induced by the hyperfine and spin-orbit interactions. The calculation procedure is based on applying successfully the adiabatic approximation of Born and Huang (Dynamical Theory of Crystal Lattices, Oxford, 1954), obtaining in this fashion a wave

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L 24920-65
ACCESSION NR: AP5003406

function of the system comprising the crystal plus the additional electron, and calculating the matrix elements of the relaxation transitions with the aid of this wave function. The parameters needed for the calculations are listed. The transition probabilities are calculated for both the contact interaction and for the spin-orbit interaction. A sample calculation for KCl shows that the contact relaxation mechanism is the most effective, and that the spin-orbit relaxation depends not only on the direction but also on the magnitude of the magnetic field. Comparison with the probabilities for single-photon transitions shows that two-phonon processes begin to prevail even at temperatures close to 10K. Inasmuch as the present calculations give for the spin-orbit relaxation time a value much larger than the experimental data, it is concluded that the most effective relaxation mechanism is not connected with the processes considered in the article. Orig. art. has: 40 formulas.

ASSOCIATION: Institut fiziki tverdogo tela AN SSSR (Institute of

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L 24920-65
ACCESSION NR: AP5003406

2

Solid State Physics AN SSSR): Institut fiziki AN UkrSSR, Kiev (Institute of Physics, AN UkrSSR)

SUBMITTED: 15May64 ENCL: 00 SUB CODE: SS

NR REF SOV: 003 OTHER: 011

Card 3/3

L 24762-65 EWA(k)/EWT(1)/EEC(k)-2/T/EEC(b)-2/EWP(k)/EWA(m)-2 Pf-4/Pi-4/P1-4/Pa-4 IJP(c) JHB/WG

ACCESSION NR: AP5003468 S/0181/65/007/001/0319/0322

39
37
B

AUTHORS: Vinetskiy, V. L.; Kravchenko, V. Ya. 21

TITLE: Single-phonon spin-lattice relaxation induced by optical oscillations

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 319-322

TOPIC TAGS: spin lattice relaxation, single phonon relaxation, optical oscillations, F center, relaxation time, magnetic field dependence

ABSTRACT: To explain the independence of the spin-lattice relaxation time of the magnetic field, observed by several investigators, the authors propose a mechanism wherein single-phonon transitions are induced by the alternating magnetic field due to the electric dipoles produced by optical lattice vibrations (this mechanism was considered in connection with the theory of nuclear relaxation by

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L 24762-65

ACCESSION NR: AP5003468

2

Kravchenko in FTT v. 4, 1797, 1962). An approximate calculation of the relaxation time due to this mechanism is presented for the case of the F-center and yields a value for the relaxation time in KCl which is approximately two orders of magnitude larger than the experimental. The reason for the discrepancy is briefly discussed. Methods for refining the calculations are suggested. It is noted in conclusion that even this result is indicative of the fact that the mechanism proposed is one of the most effective for F-centers in KCl at low temperatures. Ways for isolating this mechanism experimentally are mentioned. Orig. art. has: 9 formulas.

ASSOCIATION: Institut fiziki AN UkrSSR, Kiev (Institute of Physics AN UkrSSR); Institut fiziki tverdogo tela AN SSSR, Moscow (Institute of Solid State Physics AN SSSR)

SUBMITTED: 19Aug64 ENCL: 00 SUB CODE: SS

NR REF SOV: 005 OTHER: 003

Card 2/2

L 32076-65 EWT(l)/T/EEC(b)-2/EWA(h) Pz-6/Peb IJP(c) AT

ACCESSION NR: AP5005910 S/0185/65/010/002/0153/0165

AUTHOR: Vinets'kyy, V. L. (Vinetskiy, V. L.); Kravchenko, V. Ya.

TITLE: The quantum state of Mott's exciton in polar crystals

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 2, 1965, 153-165

TOPIC TAGS: exciton, polaron, crystal polarization, electron polaron, hole polaron

ABSTRACT: An investigation has been made of the energy spectrum of an exciton from polarons, with distortion of the potential and wave functions at finite distances between polarons taken into account. Macroscopic approximation was used. The effective masses of the electron and hole were assumed to be equal, corresponding in a zero approximation to an exciton consisting of a point electron and hole polarons. The spectrum of the system coincides with the spectrum of the hydrogen atom with an effective mass equal to the reduced mass of the electron and hole polarons and a charge of $e\varepsilon^{-1/2}$, where ε is the static dielectric state. From an analysis of experimental data for the absorption spectrum of the exciton in a cuprous oxide (which generally is interpreted as a spectrum of a "nonpolarizing exciton"), it is concluded that Cu_2O has an exciton consisting of polarons

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L 32076-65

ACCESSION NR: AP5005910

and not a Mott's model representing a nonpolarizing exciton. Investigation of the perturbation resulting from the non-point nature of the polarons and from the deformation of the wave functions of the electrons and holes in the polerons shows that a distortion of the interaction potential between the polarons caused by their non-point nature plays the basic role in the perturbation. Orig. art. has: 46 formulas. [JA]

ASSOCIATION: Instytut fizyky AN URSR, Kiev (Institute of Physics, AN UkrSSR)

SUBMITTED: 07Apr64 ENCL: 00 SUB CODE: SS

NO REF SOV: 008 OTHER: 002 ATD PRESS: 3204

Card 2/2

L 4452-66 EWA(k)/FBD/EWT(1)/EWT(m)/EEC(k)-2/EWP(i)/T/EWP(k)/EWA(m)-2/EWA(h)
SCTB/IJP(c) WG/WH

ACC NR: AP5020695 UR/0185/65/010/008/0919/0920

AUTHOR: Bayborodin, Yu. V.; Harazha, S. A.; Kravchenko, V. Y.; Spizhova, N. I.

TITLE: Prism shutter with periodic opening

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 8, 1965, 919-920

TOPIC TAGS: ruby laser, laser pumping, laser pulsation, optic prism

ABSTRACT: A multi-prism Q switch is described, consisting of a rotating prism set on the shaft of an electric motor and a series of 60 totally reflecting prisms set on an annulus. The construction allows precise adjustment of the rotating prism relative to the ruby crystal of the laser and relative to the other prisms. Rotation of the setup results in multiple opening of the shutter which in turn leads to generation of a series of laser pulses. The rate of opening in this system is twice as large as with a single-prism Q switch. The repetition rate of the pulses depends on the rate of revolution of the motor and the number of prisms on the annulus, and the number of generated pulses depends on the length of the illumination of the pump lamp and the frequency of closing the optical resonator. A repetition rate of 20 cps with a length of the illumination pulse of 2 msec resulted in a rate of 4 to 20 pulses, depending on the pump energy. A simple synchronization system of the pump results in giant light pulses with a peak close to 1 MW. Orig. art. has: 2 figures.

ASSOCIATION: Instytut fizyky AN URSR, Kyyiv [Institut fiziki AN UkrSSR, Kiyev]

Card 1/2

L 4452-65

ACC NR: AP5020695 O

(Physics Institute, AN UkrSSR)

SUBMITTED: 07Apr65 ENCL: 00 SUB CODE: OP, EC

NR REF SOV: 001 OTHER: 001

Card 2/2 Mk

L 21176-65 EWT(1)/T/EEC(b)-2 IJP(c)/APETR

ACCESSION NR: AP5003025 S/0051/65/018/001/0073/0084

AUTHOR: Kravchenko, V. Ya.; Vinetskiy, V. L.

TITLE: Temperature dependence of the parameters of the hyperfine interactions of the F-center electron

SOURCE: Optika i spektroskopiya, v. 18, no. 1, 1965, 73-84

TOPIC TAGS: temperature dependence, hyperfine interaction, interaction parameter, F-center, contact interaction, dipole-dipole interaction, lattice vibration

ABSTRACT: The authors calculate the contact and dipole-dipole parameters of the hyperfine interactions of the F-center electron, and the shift of the g-factor, taking into account the lattice vibrations. It is pointed out that in earlier investigations the ions were assumed stationary and some specific model of the F-center (molecular-orbital, point-like ions, etc.) had to be assumed beforehand. In the approximation used in the present article the contact parameter is determined not by the value of the wave function of the F-center electron in the corresponding site of the ideal lattice, but by the value of the wave function

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L 21176-65
ACCESSION NR: AP5003025

averaged over the vibrations, in the ion moving about the equilibrium position. An account of the vibrations leads to a temperature dependence of the hyperfine interaction parameters and of the g-factor shift. The analysis is based on the adiabatic approximation of Born and Huang (Dynamical Theory of Crystal Lattices, Oxford, 1954). The calculations are in agreement with the experimental data. Orig. art. has: 51 formulas.

ASSOCIATION: None

SUBMITTED: 26Feb64 ENCL: 00 SUB CODE: OP, SS

NR REF SOV: 004 OTHER: 012

Card 2/2

L 25482-66 EWT(1)/EWT(m)/T/EWP(t) IJP(c) GG/JD

ACC NR: AP6009687 SOURCE CODE: UR/0181/66/008/003/0927/0935

41

AUTHOR: Kravchenko, V. Ya. B

ORG: Institute of Solid State Physics, AN SSSR, Moscow (Institut fiziki tverdogo tela AN SSSR)

TITLE: Influence of electrons on the deceleration of dislocations in metals

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 927-935

TOPIC TAGS: crystal dislocation phenomenon, electron interaction, ultrasonic absorption

ABSTRACT: The author deals with the energy dissipation of moving dislocations resulting from the interaction of their elastic field with electrons of a metal. The deceleration force experienced by the moving dislocations as a result of the relaxation of the scattered electrons to a new equilibrium distribution is determined and is found to be independent of the temperature. Two cases are considered, namely deceleration of uniformly moving dislocations and the deceleration of dislocations that are set to vibrate by an ultrasonic wave (as in experiments on internal friction). It is shown that in the latter case the deceleration can be caused by three effects: absorption due to the dislocation itself, interference absorption due to superposition of the ultrasonic and dislocation deformation, and the ultrasonic absorption itself. The relative contributions of the different components are estimated. The possible effect of temperature at low temperatures and during the transition to the

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ACC NR: AP6009687

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superconducting state is briefly discussed and it is expected that the electrons will exert a greater influence at helium temperatures. Orig. art. has: 29 formulas.

SUB CODE: 20/ SUBM DATE: 14Jul65/ ORIG REF: 002/ OTH REF: 010.

Card 2/2 UC

ACC NR: AP7003210 SOURCE CODE: UR/0056/66/051/006/1676/1688

AUTHOR: Kravchenko, V. Ya.

ORG: Institute of Solid State Physics, Academy of Sciences, SSSR (Institut fiziki tverdogo tela Akademii nauk SSSR)

TITLE: Effect of a directed electron beam on moving dislocations

SOURCE: Zh eksper i teor fiz, v. 51, no. 6, 1966, 1676-1688

TOPIC TAGS: crystal dislocation phenomenon, kinetic equation, conduction electron, Maxwell equation, electron interaction, piezoelectric effect

ABSTRACT: The purpose of the investigation was to check the feasibility of accelerating dislocations in a crystal by applying an external electric field. To this end, the author presents a simultaneous analysis of the kinetic equations for the conduction electrons, Maxwell's equations, and the equations of motion of the medium containing the dislocations. An evaluation of the change in the free energy of the entire system consisting of the electric field and the crystal with the dislocations shows that there exist additional forces exerted by the electrons on the lattice, besides the forces acting on the moving dislocation. General expressions for these forces are derived for metals in which the dislocations move in the electric drift direction, with account taken of the mutual interaction between the electron system and the lattice, on one hand, and the dislocations on the other, and it is shown that the force on the dislocations produces acceleration if the drift velocity exceeds the

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ACC NR: AP7003210

dislocation velocity. The modifications that must be made in the calculations to allow for the piezoelectric electron-lattice coupling in semiconductors are estimated. Estimates are also presented of the order of magnitude of the accelerating force and it is concluded that in crystals having a strong piezoelectric coupling, such as CdS, the dislocation acceleration may become large enough to be measured. The author thanks A. M. Kosevich for a number of valuable remarks. Orig. art. has: 60 formulas.

SUB CODE: 20/ SUBM DATE: 15Jan66/ ORIG REF: 009/ OTH REF: 003

Card 2/2

KRAVCHENKO, V. Ye.

Machinery - Maintenance and Repair

Lengthening the service of machine parts by covering with cement, Sakh. prom 27 No. 3, 1953

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

KOTOV, A.F., inzh.; KHAVCHENKO, Ya.S., inzh.

Program control of the operations of a wheel-type excavator.
Mekh.i avtom.proizv. 16 no.4:39-41 Ap '62. (MIRA 15:4)
(Excavating machinery) (Electronic control)

KRAVCHENKO, Ya.S.

Remote control of tanks of large storage farms. Neft. khoz. 39 no. 2:55-60 F '61. (MIRA 17:2)

KRAVCHENKO, Ya.S; KRAVCHUK, T.S.

Using the EPV-01 potentiometer as a dividing device. Priborostroenie no.6:24-25 Je '64. (MIRA 18:3)

BAGRIANTSEVA, Z.A., inzh.; KRAVCHENKO, Ya.S., inzh.

Indicator device for locating the position of the actuating mechanism of a rotary excavator. Gor.zhur. no.3:58-60 Mr '65. (MIRA 18:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti UkrSSR.

KRAVCHENKO, Ya.V.

NESTERENKO, V.V., gornyy inzhener; KRAVCHENKO, Ya.V., gornyy inzhener.

The use of metal timbering in the Ingulets mine. Gor.zhur. no.1:39-42 Ja '55. (Ingulets--Mine timbering) (MLRA 8:7)

KRAVCHENKO, Ye.

Next on the Volga. Rabotnitsa 36 no.9:16-17 N '58. (MIRA 11:12)

1. Stalingradgidrostroy.
(Stalingrad Hydroelectric Power Station)

AUTHOR: Kravchenko, Ye. Secretary of the Voroshilovgrad District Committee of Ukrainian LKSM 22-3-2/25

TITLE: Such Examples are Unknown in History (Istoriya ne znala takikh primerov).

PERIODICAL: Tekhnika Molodezhi, 1958, V. 26, Nr 3, pp. 2-2 (USSR).

ABSTRACT: Amongst the numbers characterizing the industrial development of a country, those concerning the output of coal, range first. Whereas the annual output of coal amounted to 8,2 million tons in Russia in 1894, today's output attains 462 million tons. One third of the coal produced in the Soviet Union comes from Donbass. At present 150 million tons Donbass supplies, viz. 6 times more than in 1913. Yet the industry of the European part of the Soviet Union develops so rapidly that the requirement of coal could no longer be satisfied. Both the communist party and the Soviet government took measures for increasing coal production in the Donbass. It was decided to build 35 new shafts as quickly as possible in 1957. The Ukrainian Komsomol undertook to build these shafts on its own. More than 25000 young patriots came from Kiyev, Kharkov, Odessa, Zaporozh'ye, Poltava, Ternopol', Vinnitsa, Chernovits and

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Such Examples are Unknown in History. 22 3.2/25

other towns and regions of the republic. The youth took up work immediately on all fronts, both on the ground and under-ground. They lived in tents, took their meals in the open air, but they believed in victory. The spirit of competition set in immediately: Who will produce a shaft prior to the given term? The Komsomol-organizations which had taken over patronage, produced at an anticipated date. The young people learned both mining and constructing under the control of experienced workers. Thousands of young workers carried out their task one and a half-, twice- and several times quicker than provided. There is no equal in history that such a number of shafts were put in operation within such a short period. All shafts were completed by New Years Eve. The number of completed shafts amounted to 37 and not to 35 as provided. This was a wonderful present of the Komsomoltse and of the youth on the occasion of the VLKSM (Vsesoyuznyy kommunisticheskiy soyuz molodezhi).

AVAILABLE: Library of Congress.

1. Coal - Production - USSR 2. Group productivity - USSR

Card 2/2

POKRYSHCHENKO, V.F., inzh.; KRAVCHENKO, Ye.I., inzh.; CHIGRINSKIY, A.A., inzh.

Shipyard experience in laying off a theoretical plan to scale. Sudostroenie 26 no.2:61-62 (208) Feb '60. (MIRA 14:11)
(Shipbuilding)

POKRYSHCHENKO, Valentin Fedorovich; KRAVCHENKO, Yevgeniy Ivanovich; ORLOV, N.L., plazovyy razmetchik, retsenzent; SHAKHOV, A.I., inzh., retsenzent; KUZ'MENKO, V.K., nauchnyy red.; SOSIPATROV, O.A., red.; FRUMKIN, P.S., tekhn. red.

[Manual of a mold loftsman] Spravochnik rabochego-plazovshchika. Leningrad, Sudpromgiz, 1961. 200 p. (MIRA 15:3)

(Shipbuilding)

L 22027-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l)/EWA(h)/ETC(m)-6

ACC NR: AP6007917 IJP(c) JD/HM/JH UR/0125/66/000/002/0010/0014

AUTHOR: Verkin, B. I.; Kravchenko, Ye. L.; Lyulichev, A. N.

ORG: Physicotechnical Institute of Low Temperatures, AN UkrSSR (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR)

TITLE: Interlocking of aluminium with copper in high vacuum

SOURCE: Avtomaticheskaya svarka, no. 2, 1966, 10-14

TOPIC TAGS: metal bonding, cold welding, gas adsorption, compressive stress, high vacuum, adhesion, aluminum, copper, manometric lamp/LM-2 manometric lamp, IM-12 manometric lamp

ABSTRACT: This investigation was intended to determine the effect of the purity of surface on adhesion between metals (Al and Cu in high vacuum -- 10^{-9}-10^{-5} mm Hg), with the required compressive stress used as the criterion of adhesion. A specially developed experimental setup was used for this purpose (Fig. 1). Mounted within the chamber are: working assembly 1-5, device for cleaning the surface of specimens 6-12, and manometric lamps LM-2 and IM-12. The working assembly is designed to compress the specimens together. It is represented by two identical inserts, each consisting of punch 1, rod 2, guide bush 3 and sylphon 4. Specimen 5 is attached directly to the punch. The load is applied via rods 2 by means of a Brinell press. To remove oxide films from the surface directly within the chamber, use is made of a cleaning assembly

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L 22027-66
ACC NR: AP6007917

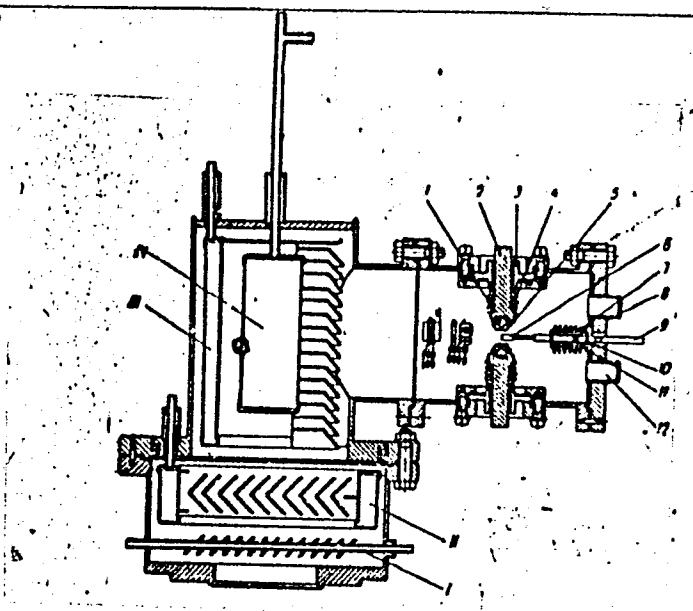

Fig. 1. Diagram of high-vacuum part of the setup:
I - water trap; II, III - nitrogen traps; IV - condensing hydrogen pump

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ACC NR: AP6007917

consisting of scraper 6, sylphon 7, rod 9, pivot 10 and washer 11. Peepholes 8, 12 make it possible to observe cleaning. The setup is evacuated by means of a N-5 diffusion pump. Traps I-III are designed to assure reliable freeze-out of the pump's oil vapors as well as of the decomposition products. Findings: even insignificant contamination of Al and Cu surfaces increases the required compressive stress by one order of magnitude. Cleaned surface of Al in a vacuum of $1 \cdot 10^{-9}$ mm Hg is contaminated by adsorbed gases. The degree of contamination is proportional to the product of pressure and exposure time, i.e. to the amount of gas adsorbed at the surface from the chamber's interior; mechanical cleaning of the surface is naturally ineffective in such cases. Thus more effective methods of surface treatment of specimens are needed before the aspects of adhesion between metals in high vacuum can be properly investigated. It can be established, however, that the compressive stress is not a physical characteristic of the adhesive properties of pure surfaces, since it is a function of surface roughness. Thus it is theoretically possible that atomically smooth and pure surfaces can mutually interlock without requiring mechanical compression: Orig. art. has: 6 figures.

SUB CODE: 11, 13, 20/ SUBM DATE: 09Sep65/ ORIG REF: 006/ OTH REF: 005

vacuum diffusion bonding

bonding of dissimilar metals

Card 3/3

KRAVCHENKO, Ye.P.

Vagosympathetic block by A.V.Vishnevskii's method in total bronchoscopy. Eksper. khir. i anest. 9 no.6:62-63 N-D '64. (MIRA 18:7)

1. Gorodskaya klinicheskaya bol'nitsa Shevchenkovskogo rayona (glavnyy vrach N.I.Bogunova), Kiyev.

GERASIMOVICH, V.A.;KRAVCHENKO, Ye.P.

Survey of fungous and bacterial diseases of wart-resistant potato varieties. Sbor.nauch.trud.Inst.biol.AN BSSR no.2:23-35 '51.
(MLRA 9:1)

(Potatoes--Diseases and pests)

KRAVCHENKO, Ye, P.

Apple

Formation of the crowns of apple trees of different varieties with relationship to their branching and growth. Sad i og. No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

PAVLOV, A.N., otv. za vypusk; VOLODICHEVA, V.N.; IVANOVA, A.I.; KULAKOV, I.N.; LYAMINA, T.N.; MIT'KINA, L.I.; POZDNYAKOVA, N.P.; RODICHOVA, L.I.; ROMANOVA, N.M.; SOFIYEV, E.S.; CHICHKINA, A.A.; TRESORUKOVA, Z.G.; BOGATYREV, P.P.; BROVKINA, A.I.; IVANOVA, L.D.; IVASHKIN, G.A.; KAMNEV, N.I.; LYSANOVA, L.A.; OZHERKL'YEVA, Z.I.; PAVLOVA, T.I.; TYUTYUNOVA, N.I.; UMNITSYNA, A.P.; ZHIVILIN, N.N.; ALESHICHEV, M.P.; VINOGRADOV, V.I.; YEREMIN, F.S.; KRAVCHENKO, Ye.P.; LOVACHEVA, M.V.; NIKOL'SKAYA, V.S.; MAKHOV, G.I.; SKEGINA, A.V.; TAREYEV, A.V.; KHOLINA, A.V.; BRYANSKIY, A.M.; BURMISTROVA, V.D.; GRIGOR'YEVA, A.M.; LUTSENKO, A.I.; OREKHOVA, Z.V.; TEPLINSKAYA, N.V.; FEOKTISTOVA, V.I.; BUTORIN, I.M.; BOCHKAREVA, L.D.; BURENINA, V.A.; VETUSHKO, A.M.; VIKHLYAYEV, A.A.; SOROKIN, B.S.; TSYBENKO, L.T.; KHLEBNIKOV, V.N.; DUMNOV, D.I.; STEPANOVA, V.A.; MANYAKIN, V.I., red.; VAKHATOV, A.M.; MAKAROVA, O.K., red.izd-va; PYATAKOVA, N.D., tekhn.red.

[Soviet agriculture; a statistical manual] Sel'skoe khozyaistvo SSSR; statisticheskii sbornik. Moskva, 1960. 665 p.
(MIRA 13:5)

1. Russia (1923- U.S.S.R.) TSentral'noye statisticheskoye upravleniye. 2. Upravleniye statistiki sel'skogo khozyaystva TSentral'nogo statisticheskogo upravleniya SSSR (for all except Makarova, Pyatakova).

(Agriculture--Statistics)

KRAVCHENKO, Ye.T.

Dismountable device for loading heavy electric equipment onto trucks. Rats. i izobr. predl. v strei. no.117:19-21 '55. (Loading and unloading) (MLRA 9:7)

L 06139-67 EWT(m) IJP(c)
ACC NR: AP6031170 SOURCE CODE: UR/0361/66/000/002/0003/0015

AUTHOR: Nemenov, L. M.; Anisimov, O. K.; Arzumanov, A. A.; Golovanov, G. N.; Yezerskiy, V. F.; Kravchenko, Ye. T.; Kruglov, V. G.; Laktionov, I. A.; Meshcherov, R. A.; Meshcherova, I. V.; Popov, Yu. S.; Prokof'yev, S. I.; Rybin, S. N.; Fedorov, N. D.

ORG: Institute of Nuclear Physics, AN KazSSR (Institut yadernoy fiziki AN KazSSR)

TITLE: Putting the Kazakhstan cyclotron into operation

SOURCE: AN KazSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 2, 1966, 3-15

TOPIC TAGS: cyclotron, proton accelerator, Mev accelerator, alpha particle / U1502 cyclotron

ABSTRACT: The U-150-2 cyclotron of the Institute of Nuclear Physics of the Academy of Sciences of the Kazak SSR is described. This cyclotron is designed to accelerate protons, deuterons, alpha particles, and multiply charged ions. Energies of 24 Mev are obtained with deuterons. Alpha particles and protons can be accelerated to 48 Mev and 20 Mev, respectively. Sixfold ionized carbon can be accelerated to 140 Mev. The magnetic field in the cyclotron necessary for 20 Mev deuteron production is 14000 oersteds; this is produced by a current of 800 amp. The necessary variation of the magnetic field with radius is obtained by the use of annular shims. The high frequency generator and its alignment is described. The dependence of beam current at various

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ACC NR: AP6031170

final radii is plotted as a function of the potential between the "dees". The authors thank engineers V. A. Borisov, B. L. Vaysman, N. G. Gladenko, senior electronic engineer D. D. Gromov, chiefs of work shifts G. A. Obraztsov and V. E. Oshkin, and chief of service A. I. Tkachev for participation in the work of setting aright the various difficulties involved in setting up the cyclotron. Orig. art. has: 11 figures.

SUB CODE: 18/20/ SUBM DATE: none

Card 2/2 mfc

MORDOVSKIY, V.T.; KRAVCHENKO, Ye.V.; FEDOROV, S.F.

[Geological structure of the southern part of the Siberian Platform] Geologicheskoe stroenie iuzhnoi chasti Sibirskoi platformy. Moskva, Izd-vo Akademii nauk SSSR, 1953. 102 p. (MLRA 6:12)
(Siberian platform--Geology) (Geology--Siberian platform)

KRAVCHENKO, Ye.V.

ODINTSOV, M.M.; PAVLOVSKIY, Ye.V.

Book of V.T.Mordovskii, E.V.Kravchenko, and S.F.Fedorov "Geological structure of the southern part of the Siberian Platform." Reviewed by M.M.Odintsov, E.V.Pavlovskii. Izv. AN SSSR. Ser.geol. 19 no.2: 161-163 Mr-Ap '54. (MLRA 7:7)
(Siberian Platform--Geology, Structural) (Geology, Structural--Siberian Platform) (Mordovskii, V.T.) (Kravchenko, E.V.) (Fedorov, S.F.)

LOGACHEV, N.A.; KRAVCHENKO, Ye.V.

Basalt distribution in the Tunkin depression. Dokl. AN SSSR 104 no.4:597-600 O '55. (MLRA 9:2)

1.Institut geologii Vostochno-Sibirskogo filiala Akademii nauk SSSR i Vostochno-Sibirskiy geologo-razvedochnyy trest. Predstavlena akademikom N.S.Shatskim.
(Tunkin depression--Basalt)

KRAVCHENKO, Ye. V.

VASIL'YEV, V.G.; KARASEV, I.P.; KRAVCHENKO, Ye.V.

Geological structure of the southern region of the Siberian Platform and oil-bearing possibilities of Cambrian deposits. Neft.khoz.34 no.11:36-43 N '56. (MIRA 10:1)
(Siberian Platform--Petroleum geology)

VASIL'YEV, Viktor Grigor'yevich; KALENOV, Yevgeniy Nikolayevich; KARASEV, Ivan Petrovich; KRAVCHENKO, Yevgeniy Vasil'yevich; MANDEL'BAUM, Mark Mironovich; BORISOV, A.A., redaktor; FILIPPOVA, Ye.A., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskiy redaktor.

[Geological structure of the southern Siberian Platform and the oilbearing prospects of Cambrian rocks] Geologicheskoe stroenie iuga Sibirskoi platformy i neftenosnost' kembriia. Pod red. A.A.Borisova. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 226 p. (MIRA 10:11)
(Siberian Platform--Geology, Structural) (Petroleum geology)

VASIL'YEV, V.G.; KARASEV, I.P.; KRAVCHENKO, Ye.V.

Basic trends in prospecting for oil and gas regions of the Siberian Platform. Geol. nefti 1 no.1:11-19 Ja '57. (MLRA 10:8)
(Siberian Platform--Petroleum geology)
(Siberian Platform--Gas, Natural--Geology)

BARKHATOV, G.V.; VASIL'YEV, V.G.; GRISHIN, G.L.; KARASEV, I.P.; KISELEV, S.I.; KRAVCHENKO, Ya.V.; MORDOVSKIY, V.T.; TIKHOMIROV, YU.P.; CHEPIKOV, K.R.; YUNGANS, S.M., ved.red.; FEDOTOVA, I.G., tekhn.red.

[Oil and gas in the eastern Siberian Platform] Neftegazonosnost' Vostochno-Sibirskoi platformy. Pod red. K.R. Chepikova. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 130 p. (MIRA 12:1)

1. Chlen-korrespondent AN SSSR (for Chepikov).
(Siberian Platform--Gas, Natural)
(Siberian Platform--Petroleum)

KARASEV, I.P.; KRAVCHENKO, Ye.V.

Principal results of petroleum and gas prospecting in the Irkutsk amphitheater and its prospective resources of petroleum and gas. Sov.geol. 1 no.12:88-98 D '58. (MIRA 12:4)

1. Vostochno-Sibirskoye geologicheskoye upravleniye.
(Siberia, Eastern--Petroleum geology)
(Siberia, Eastern--Gas, Natural--Geology)

S/123/62/000/013/018/021
A004/A101

AUTHORS: Anisovich, G. A., Grinkevich, R. N., Kravchenko, Ye. V.

TITLE: Determining the thermophysical coefficients of nonmetallic materials

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 4, abstract 13G21 ("Sb. nauchn. tr. Fiz.-tekhn. in-t AS BSSR", 1960, no. 6, 183-192)

TEXT: The thermal properties of the mold considerably affect the forming process of the casting. Thus, e.g. it is possible to change by several times the metal freezing rate and, consequently, affect the properties of the casting, by adding wood sawdust or cast-iron filings to the molding mixture. The thermal properties of the mold do not only depend on the composition, but also on the temperature of the metal to be cast. In connection with this problem, a theory has been developed and a method tested to determine the thermophysical properties of materials in the non-study state at different temperatures. In the test, the thermophysical coefficients are determined by pouring metal at the crystallization temperature into the mold being tested. According to the test data, the thermophysical coefficients of molding mixtures can mainly be calculated with the aid

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of two methods - the graphic analytical and analytical methods. In determining the thermophysical properties of materials by the graphic analytical method it is necessary to carry out a graphical differentiation and integration of the experimental curve describing the temperature distribution in the mold. This method is very cumbersome, labor-consuming and of insufficient accuracy. To determine the thermophysical properties of materials by the analytical method, it is necesarry to know the function $t = f(x, \tau)$, describing the temperature field of the mold. This function can be presented in an approximate form. In this case the truth of the results obtained will depend on the degree of accuracy with which the assumed function describes the actual temperature field of the mold. The authors suggest an approximate method to determine the coefficients with the aid of a parabola of the nth order or of an exponential curve, developed further from the methods by A. I. Veynik, O. Yu. Kotsyubinskiy and A. S. Khinchin. Both methods are based on the classical solution of the problem on the temperature field of a semi-limited body at boundary conditions of the first kind.

[Abstracter's note: Complete translation]

KRAVCHENKO, Yu.A.

Antirecidivous treatment of peptic ulcers of the stomach and the duodenum at a medical center. Vrach. delo no.1:134 Ja'64 (MIRA 17:3)

1. Zavodskoy zdravpunkt Berdyanskogo gorlovogo lechebnogo ob"yedineniya Zapotozhskoy oblasti.

KRAVCHENKO, Yu.I.

Attachment for machining index pins for cup-shaped cutters.
Sbor. rats. predl. vnedr. v proizv. no.2:62-64 '61.
(MIRA 14:7)

1. Truboprokatnyy zavod imeni K. Libknekhta.
(Lathes—Attachments)

KRAVCHENKO, YU. S.

27805. KRAVCHENKO, YU. S. -- O metodike aprobatsii posevov. Selektsiya i semenovodstvo, 1949, No. 9, C. 10-12

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

KRAVCHENKO, [illegible], kand.sel'skokhozyaystvennykh nauk (Kishinev)

[illegible] vegetable plant. Biol. v shkole no.5:80-81 S-O '61.
(MIRA 14:9)

(Okra)

AKHREM, A.A.; TITOV, Yu.A.; KRAVCHENKO, Z.A.

New synthesis of an analog of steroid compounds without the ring B. Izv. AN SSSR Ser. khim. no.7:1355 Jl '64.
(MIRA 17:8)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

[illegible], [illegible]; FILIPPENKO, [illegible]; [illegible]

Synthesis of diethyl ether of [illegible]ylene [illegible]. Zhur. prikl. khim. 38 no.1:214-216 Ja '65 [illegible]

1. [illegible]-issledovatel'skiy institut [illegible].

KURYNDIN, Ivan Ivanovich; MALINKOVSKIY, V.V.; VEN'YAMINOV, A.N.; BELOKHONOV, I.V.; KRAVCHENKO, Z.I., redaktor; PEVZNER, V.I., tekhnicheskiy redaktor

[Fruit culture] Plodovodstvo. Izd. 5-oe, perer. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 464 p. (MLRA 9:11)
(Fruit culture)

KRAVCHENKO, Z.I.

NIKITIN, Sergey Aliksandrovich; KRAVCHENKO, Z.I., redaktor; GUREVICH, M.M., tekhnicheskiy redaktor

[Sunflowers] Podsolnechnik. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 159 p. (MLRA 10:4)
(Sunflowers)

OSLIKOVSKAYA, Yelena Sergeyevna; KRAVCHENKO, Z.I., red.; SMIRNOVA, Ye.A., tekhn.red.

[Methods of promoting scientific achievements and advanced practices] Metodika propagandy nauchnykh dostizhenii i peredovogo opyta. Izd.2., perer. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1958. 230 p. (MIRA 12:7)
(Agricultural extension work)

TSYGANOV, Mikhail Stepanovich, professor; KRAVCHENKO, Z.I., red.;
GUREVICH, M.M., tekhn.red.

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KLIMOVSKAYA, L.K.; KRAVCHENKO-BEREZHNOY, R.A.

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Card 1/4

KRAVCHENKO-BEREZHNOY, R.A.

Concerning the practice of the theodolite-immersion method.
Mat.po min.Kol'.poluost. 1:180-186 '59. (MIRA 15:2)
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KRAVCHENKO-BEREZHNOY, R.A.

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KRAVCHENKO-BEREZHNOY, R.A.; POLEZHAYEVA, L.I.

Variety of microspectrophotometer with automatic spectral recording. Izv.Kar. i Kol'.fil. AN SSSR no.2:66-72 '59. (MIRA 12:11)

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(Microspectrophotometry)

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Transmission spectra of the lanthanides in finely crystalline preparations, and their analytical application. Zav. lab. 29 no.6:688-691 '63. (MIRA 16:6)

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DUDKIN, O.B.; KRAVCHENKO-BEREZHNOY, R.A.

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(Spectrophotometer)
(Mineralogy, Determinative)

DENISOV, A.P.; DUDKIN, O.B.; YELINA, N.A.; KRAVCHENKO-BEREZHNOY, K.A.; POLEZHAYEVA, L.I.

Relationship between the physical properties of apatite and the admixture of rare earths and strontium. Geokhimia no.8:666-675 '61. (MIRA 17:3)

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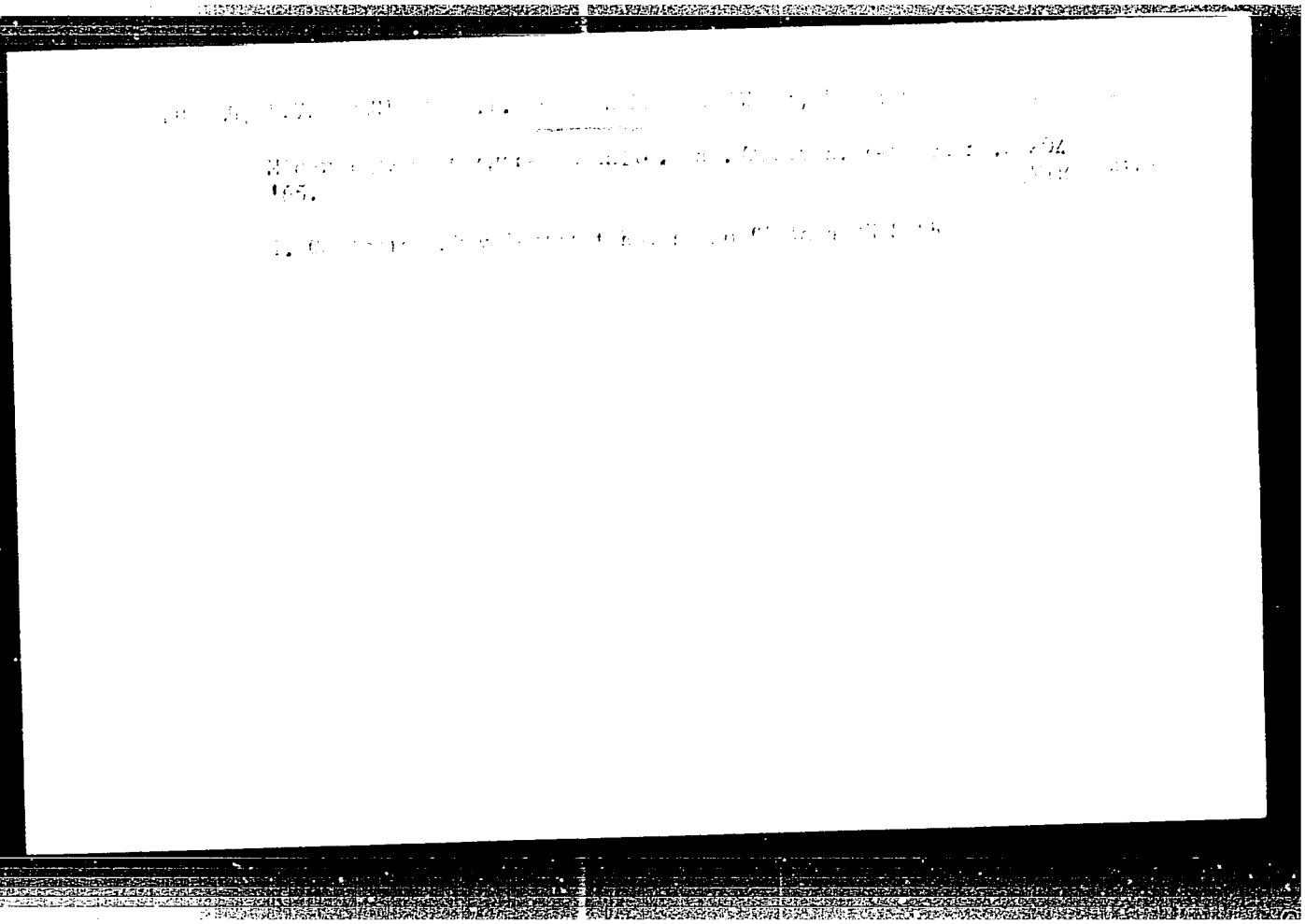

L 52194-65 EWT(m)/EWP(b) JD/JG

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AUTHORS: Kravchenko-Berezhnoy, R. A.; Polezhayeva, L. I.

TITLE: Taking into consideration the noise during x-ray spectrographic determination of rare earth elements

SOURCE: Zavodskaya laboratoriya, v. 31, no. 4, 1965, 436-440

TOPIC TAGS: x ray spectroscopy, spectrum line, rare earth, noise analysis / DRUS 2 spectrometer, SI 3p beryllium window, EPP 09M2 potentiometer

ABSTRACT: A method is outlined for measuring the background noise in the x-ray spectroscopic analyses of rare earth materials. (Background noise means the spectral intensity distribution of radiation not connected with the analytic lines of the given rare earth material.) In order to accomplish this, the active regions of the x-ray spectra were investigated using the DRUS-2 spectrometer (2900-5400X) with a quartz crystal with a 500-mm radius of curvature. For pure rare earth oxides the noise intensity ratio between 5400X and 2900X is 1:3. Very weak noise lines were also observed with pure rare earth specimens. The results also showed that the noise level was independent of the atomic number of the rare

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earth element. A table of correction factors K_{ij} for 14 rare earth elements was prepared to account for the superposition of spectral lines of several other rare earth materials on the analytic lines of the particular element under study. A second table was also prepared for the complete rare earth group where the noise intensity was listed under three headings: in the peak region of the analytic lines, noise below the lines, and the noise measured next to the lines. These tables show HoLα_1 superposition on GdLβ_1, SmLγ_1 and on TuLα_1 to be quite significant along with several other rare earth elements. Orig. art. has: 2 tables.

ASSOCIATION: Geologicheskiy institut, Kol'skiy filial im. S. M. Kirova Akademii nauk SSSR (Geological Institute, Kol'skiy branch, Academy of Sciences SSSR)

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Card 2/2

BADKIN, A.G.; KRAVCHENKO-BEREZHNOY, R.A.; MEDVEDEV, M.Y.

Work of the mathematical group at the Kola Branch of the Academy of Sciences of the U.S.S.R. Zav.lab. 31 no.10:1260-1261 '65. (MIRA 19:1)

1. Kol'skiy filial imeni Kirova AN SSSR.

L 21921-66 EWA(h)/EWT(d)/EWT(l) IJP(c) GW/JT

ACC NR: AP6014630 SOURCE CODE: UR/0032/65/031/010/1280/1281

AUTHOR: Babkin, A. G.; Kravchenko-Bereshnoy, R. A.; Medvedev, M. Yu. 83 77 B

ORG: Kola Branch im. S. M. Kirov, AN SSSR (Kol'skiy filial AN SSSR)

TITLE: Work of the mathematics group at the Kola Branch of the Academy of Sciences USSR 16, 44

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1280-1281

TOPIC TAGS: scientific organization, statistics, electronic computer, magnetic field, charged particle, particle motion, mathematic personnel, crystallography, seismology, geophysics, analytic chemistry

ABSTRACT: In 1963 a mathematics group was organized at the Kola Affiliate of the Academy of Sciences USSR. Several large scientific research institutes are found at the Affiliate, hence, the mathematics group is called upon to solve quite different topical tasks. Since the investigations, as a rule, are associated with experiment, the main means of solving a majority of the problems are the methods of mathematical statistics and, particularly, the theory of experiment planning. In the first stage the work of the group concerned the exposition of tasks, their arrangement and the specialization of mathematicians according to the types of tasks. The Minsk-1 electronic computer was used to solve a series of tasks on the motion of a charged particle in magnetic fields, the task of exploratory geophysics, seismology,

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