The Preparation of Lustrous Coatings by the Electric Deposition of Copper-Gold Alloys

The best results were obtained under the following conditions of electrodepositing: the concentration of metal gold - 2 g/l; of metal copper - 9 g/l, KCN_{free} - 10 to 12 g/l; thiourea - 0.6 to 0.8 g/l; temperature - 60 ± 2°C; density of current - 1.5 amp/dm^2. The stirring of the electrolyte by means of mechanical stirrers or ultrasound was found to produce a positive effect on the quality of deposits.
There are 3 graphs, 1 table and 16 references, 7 of which are Soviet, 5 English, 3 German and 1 American.

SUBMITTED: July 8, 1957

Card 2/2

ACCESSION NR: AP4043037 S/0077/64/009/004/0254/0259

AUTHORS: Dimitrov, R. V.; Grin', Yu. F.

TITLE: The study of hyperspeed development kinetics. 2. Determining duration of various stages in film development

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 9, no. 4, 1964, 254-259

TOPIC TAGS: photographic film, camera, silver deposit, emulsion,/17 T film, double negative type A film, Kiev 16S 2 camera, SKS 1M camera

ABSTRACT: The method of I. B. Blyumberg and R. V. Dimitrov (Zh. nauchn. i prikl. fotogr. i kinematogr., 1963, 8, 161) were used to determine the photographic density continuously during film development. Two types of movie cameras were used: the Kiev 16S-2 camera, 64 frames/sec and the SKS-1M camera with 900 frames/sec in white light. The development processes investigated were: swelling of film layer, penetration into this layer of the alkali, temperature front, induction period, and visible reduction of silver. The films used in the investigation were isopanchromatic films 17-T and Double-negative type A motion picture films. The D(t) curves of the following cases were constructed: dry films

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ACCESSION NR: AP4043037

and water-swollen films at 20C temperature immersed in the developer and heated to 60C; dry films and water-swollen films heated to 60C and immersed in developer at same temperature; films (swollen in alkali and sulfide solutions at 60C) immersed in developer at the same temperature; films swollen in developer at 60C and immersed in alkali and sulfide solutions at the same temperature; and exposed films, with preliminary swelling in the developer at 60C. The developer for the double-negative films was the same as for those of type 17-T except for the exclusion of the benzotriazole component. The maximum value of D in the D versus t curves for type 17-T film was 2.5, attained at various time rates from 2.2 to 1.0 seconds, depending on the process under study. The double-negative films showed no such maxima in D. The results also show the diffusion rates of the various developers used to be almost identical. The highest rate of the development process was registered by the AgHal reduction reaction. "The authors express their deep gratitude to I. B. Blyumberg, Yu. Yo. Usanov and V. A. Karpov for assisting in the work." Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Leningradskiy institut kinoinzhenerov (LIKI) (Leningrad Institute of Motion Picture Engineering, LIKI)

SUBMITTED: 18Jul63 ENCL: 00

SUB CODE: PS NO REF SOV: 003 OTHER: 003

Card 2/2

DIMITROV, R.V.; GRIN', Yu.F.

Analyzing the kinetics of high-speed developing. Part 2. Determining the time of the various development stages. Zhur.nauch. i prikl.fot. i kin. 9 no.4:254-259 Jl-Ag '64. (MIRA 17:10)

1. Leningradskiy institut kinoinzhenerov (LIK).

GRIN', YU.T.

"Pair Correlations of Nucleons in Nuclei"

report submitted for the 2nd USSR Conference on Nuclear Reactions at Low and Intermediate Energies, Moscow, 21-28 July 1960.

GRIN', Yu.T.; DROZOV, S.I.; ZARETSKIY, D.F.

Green's function for odd nuclei. Zhur. eksp. i teor. fiz. 38 no.1:222-228 Jan '60. (MIRA 14:9)
(Potential, Theory of) (Nuclei, Atomic)

83739

S/056/60/038/004/032/048
B006/B056

24.6520

AUTHORS: Grin', Yu. T., Drozdov, S. I., Zaretskiy, D. F.

TITLE: The Moments of Inertia of Odd Atomic Nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 4, pp. 1297 - 1303

TEXT: In the regions $150 < A < 190$ and $A > 225$ the atomic nuclei are deformed and, besides single-particle levels, they have also rotational ones. It was found experimentally that the moments of inertia of odd nuclei surpassed those of even nuclei considerably. Several authors have dealt with the derivation of formulas for the moments of inertia of even and odd nuclei, without, however, taking pair correlation into account. The authors of the present paper, for the purpose of determining the moments of inertia (taking pair correlation into account), use the Green functions for a finite system having an odd number of particles. The calculation method is analogous to that used by A. B. Migdal for even-even nuclei (Refs. 3,4). An explicit formula (18) is obtained for δJ, in which the difference of the moments of inertia $J_e(\varkappa_e) - J_e(\varkappa_o)$

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The Moments of Inertia of Odd Atomic Nuclei

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B006/B056

occurs as an unknown term (the subscripts e and o mean even and odd). $\varkappa = \hbar\omega_0\beta/2\Delta$, $\hbar\omega_0 = 41\ A^{-1/3}$ Mev. The Δ values are partly known from the experiment and partly determined by interpolation according to the formula $\Delta_e = \Delta_o + 1/\varrho_o$, where ϱ_o denotes the density of the single-particle levels near the Fermi surface. For calculating the difference of J_e, Δ_e, Δ_o, β_e, and β_o must be known. These four parameters are given in Table 1 for a total of 19 nuclei between $_{64}Gd^{155}$ and $_{96}Cm^{245}$, as well as the relative change in the moments of inertia for nuclei having odd numbers of neutrons $\delta J/J_T$ (in %). (J_T is the moment of inertia of the solid; $\delta J/J_T \sim A^{-1/3}$). Table 2 gives the same parameters for nuclei having odd numbers of protons (11 nuclei from $_{67}Ho^{165}$ to $_{95}Am^{243}$). The authors thank S. T. Belyayev and A. B. Migdal for discussions. There are 2 tables and 9 references: 4 Soviet, 1 US, 1 Dutch, and 3 Danish.

SUBMITTED: November 17, 1959

Card 2/2

84718

S/056/60/039/001/038/041/XX
B006/B056

24.1520

AUTHOR: Grin', Yu. T.

TITLE: The Influence Exerted by Pair Correlation of Nucleons Upon the Probability of Electromagnetic Transitions in the Nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 1(7), pp. 138-140

TEXT: The author investigates the influence exerted by pair correlation of nucleons upon the electromagnetic transitions in a deformed nucleus, in which the inner state of the nucleons is determined by the projection of the total momentum of the nucleon upon the symmetry axis of the nucleus. The totality of $\pm\Omega$ and of the remaining state characteristics is denoted by $\pm\lambda$. By using a wave function of a system with odd particle number, which was given by S. T. Belyayev, and a mass-defect formula $\Delta = (1/2)|2E_0(N+1)-E_0(N+2)-E_0(N)|$, obtained in Ref. 2, where $E_0(N)$ is the ground-state energy of an N-particle system, the transition of a system from the state $+\lambda_2$ to the state $+\lambda_1$ is investigated for the case of odd

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The Influence Exerted by Pair Correlation of Nucleons Upon the Probability of Electromagnetic Transitions in the Nucleus

S/056/60/039/001/038/041/XX
B006/B056

particle numbers in both states; the Δ of the states are different: $\Delta' - \Delta = \delta \ll \Delta$. It may be shown that in the case of the so-called "single-particle" transitions in an odd nucleus, in reality "single-quasiparticle" transitions are concerned. The matrix element of such a transition is a superposition of the matrix elements of a transition of particle $+\lambda_2 \rightarrow +\lambda_1$ and that of a hole $-\lambda_1 \rightarrow -\lambda_2$. Thus, the pair correlation considerably changes the shape of the transition matrix element, and likewise, accordingly, the transition probability. Investigation of an electric multipole transition in the neighborhood of the Fermi surface shows that such a transition has a forbiddenness factor $\sim A^{-2/3}$ in comparison to a single-particle transition. M. Ye. Voykhanekiy and Yu. N. Gnedin have calculated single-particle transition probabilities, and found that the theoretical values deviate by about one order of magnitude from the experimental ones. If, however, the pair correlation is taken into account, the agreement between the theoretical and experimental values is good. The author finally thanks D. F. Zaretskiy and V. M. Strutinskiy for discussing the results obtained. There are 1 table and 3 references: 2 Soviet and 1 Danish.

SUBMITTED: February 15, 1960

Card 2/2

27480
S/048/61/025/009/005/007
B104/B102

24.6300

AUTHORS: Grin', Yu. T., and Zaretskiy, D. F.

TITLE: Collective excitations of non-spherical nuclei

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 9, 1961, 1169 - 1175

TEXT: This paper was read at the 9th Annual Conference on Nuclear Spectroscopy. The authors generalize the theory of collective excitations of non-spherical nuclei. An equation is set up for the frequencies of collective nuclear oscillations, and a relation between the frequencies of the excited $\beta(k=0)$ and $\gamma(k=2)$ vibrational levels is derived in quasi-classical approximation. Using the Green's two-particle function $K = \langle \Phi_0 | T(a_1 a_2^+ a_3 a_4^+) | \Phi_0 \rangle$, the equation

$$1 = \varkappa \sum_{12} \frac{(E_1 E_1 - \varepsilon_1 \varepsilon_2 + \Delta^2)}{2E_1 E_2 \left[\omega^2 - (E_1 + E_1)^2\right]} \left| (q_{2k})_{12} \right|^2 \qquad (9)$$

Card 1/5

Collective excitations of non- .....

is obtained for the frequencies of the bound states of two quasi-particles. Within the framework of the Nilsson model Eq. (9) can only be solved numerically for a real model. Using the model of an axisymmetrically deformed oscillator potential, the authors attempt to find a solution to this equation. Eq. (9) is represented in the form

$$1 = \varkappa \sum_{\lambda\lambda'} \frac{2\Delta^2 |q_{\lambda\lambda'}|^2}{E_\lambda (4E_\lambda^2 - \omega^2)} + \varkappa \sum_{\lambda\lambda'}{}' \frac{(E_\lambda E_{\lambda'} - \varepsilon_\lambda \varepsilon_{\lambda'} - \Delta^2)(E_\lambda + E_{\lambda'})}{2E_\lambda E_{\lambda'} [(E_\lambda + E_{\lambda'})^2 - \omega^2]} |q_{\lambda\lambda'}|^2, \quad (15)$$

The first term is the sum over all transitions without energy change, and the second term is the sum over all other transitions. Since ω is negligible in the latter sum, Eq. (15) can be reduced to

$$1 = \varkappa' \sum_{\lambda\lambda'} \frac{2\Delta^2}{E_\lambda (4E_\lambda^2 - \omega^2)} |q_{\lambda\lambda'}|^2, \quad (16).$$

where

$$\varkappa' = \frac{\varkappa}{1 - \varkappa \sum_{\lambda\lambda'}{}' \frac{E_\lambda E_{\lambda'} - \varepsilon_\lambda \varepsilon_{\lambda'} + \Delta^2}{2E_\lambda E_{\lambda'} (E_\lambda + E_{\lambda'})} |q_{\lambda\lambda'}|^2}.$$

Card 2/5

Collective excitations of non- ....

In quasi-classical approximation, Eq. (16) leads to

$$1 - \varkappa' \frac{4\Delta^2}{\omega^2\sqrt{\frac{4\Delta^2}{\omega^2} - 1}} \operatorname{arctan} \frac{1}{\sqrt{\frac{4\Delta^2}{\omega^2} - 1}} \sum_{\lambda\lambda'} |q_{\lambda\lambda'}|^2 \delta(\varepsilon_\lambda); \quad \varkappa \sim \varepsilon_0 / AR_0^4.$$

The following explicit solutions are obtained from this equation:

$$\omega = 2\Delta \sqrt{\frac{3}{2}} \cdot \sqrt{1 - \varkappa' \sum_{\lambda\lambda'} |q_{\lambda\lambda'}|^2 \delta(\varepsilon_\lambda)} \quad \text{for } \omega \ll 2\Delta \text{ and}$$

$$\omega = 2\Delta \left\{1 - \frac{\pi}{8} \varkappa'^2 \left[\sum_{\lambda\lambda'} |q_{\lambda\lambda'}|^2 \delta(\varepsilon_\lambda)\right]^2\right\} \quad \text{for } 2\Delta - \omega \ll 2\Delta.$$

An analysis of these solutions indicates that collective excitations with energies much less than 2Δ may exist in deformed nuclei. β- and γ-vibrations are interrelated by

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Collective excitations of non- ....

$$\frac{\omega_\beta^2}{\omega_\gamma^2} = \frac{\sum_{\lambda\lambda'} \frac{1 - g\left(\frac{\varepsilon_\lambda - \varepsilon_{\lambda'}}{2\Delta}\right)}{\left(\frac{\varepsilon_\lambda - \varepsilon_{\lambda'}}{2\Delta}\right)^2} (q_{22})^2_{\lambda\lambda'} \delta(\varepsilon_\lambda)}{\sum_{\lambda\lambda'} \frac{1 - g\left(\frac{\varepsilon_\lambda - \varepsilon_{\lambda'}}{2\Delta}\right)}{\left(\frac{\varepsilon_\lambda - \varepsilon_{\lambda'}}{2\Delta}\right)^2} (q_{20})^2_{\lambda\lambda'} \delta(\varepsilon_\lambda)} . \qquad (23)$$

From this relation, it is concluded that the frequencies of β- and γ-vibrations agree within the framework of the model of an axisymmetric oscillator potential. The agreement of the frequencies is closely related to the degeneracy of the levels in the oscillator potential. Finally, the Nilsson model without spin-orbital coupling is briefly discussed. The following values are obtained for the ratio $\omega_\beta/\omega_\gamma$ as a function of $\alpha = 2D\varepsilon_0/\omega_0\Delta$:

α	1.8	2.25	3.0	4.5
$\omega_\beta/\omega_\gamma$	0.90	0.86	0.80	0.72

S. T. Belyayev (Zh. eksperim. i teor. fiz. 39, 1387 (1960)) is mentioned.

Card 4/5

Collective excitations of non- ...

There are 11 references: 7 Soviet and 4 non-Soviet. The references to English-language publications read as follows: Marumori T., Progr. Theor. Phys., 24, 331 (1960); Baranger M., Phys. Rev., 120, 957 (1960); Perlman I., Proceedings of the International Conference on Nuclear Structure, p. 547, Kingston, Canada, 1960.

X

Card 5/5

GRIN', Yu.T.

Probability for an E2-transition from the first 2+ level in spherical nuclei. Zhur.eksp.i teor.fiz. 40 no.3:784-785 Mr '61. (MIRA 14:8)

(Nuclei, Atomic)

GRIN', Yu.T.

Nonadiabatic corrections to the rotational spectrum of atomic nuclei. Zhur.eksp.i teor.fiz. 41 no.1:222-225 Jl '61. (MIRA 14:7)

(Nuclei, Atomic—Spectra)

S/056/61/041/002/014/028
B111/B112

AUTHOR: Grin', Yu. T.

TITLE: Effect of rotation on pair correlation in the nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 2, 1961, 445 - 450

TEXT: Rotation of paired particles leads to a decrease of the energy gap Δ and to an increase of the moment of inertia. Since the change of Δ depends on the velocity of rotation or the spin I of the system this effect requires a correction to the moment of inertia which is proportional to $I(I+1)$ and to the energy which is proportional to $I^2(I+1)^2$. The author gives diagonal corrections to the solution of A. Migdal (Ref.1: ZhETF, 37, 249, 1959).

$\Delta = \gamma \int_C F^*(\vec{r}, \vec{r}, \omega) \cdot \frac{d\omega}{2\pi}$, where $F(\vec{r}, \vec{r}, \omega)$ - is a Fourier component of F with respect to time, γ is the interaction constant of the particles. The contour C consists of the real axis and an infinite semicircle in the upper

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semiplane. The diagonal corrections of the perturbation term $M^x\Omega$, where M^x is the angular momentum with respect to the x axis, Ω is the angular velocity are given in second perturbation theoretical approximation. In second order $\overline{\Delta''} = -\left(\sum_\lambda F''_\lambda(0)\right)/\left(\sum_\lambda 1/2E_\lambda\right)$ is obtained for Δ averaged over the nuclear volume. An estimation shows that the corrections to $\overline{\Delta''}$ can be neglected due to changes of the chemical potential.

$\frac{\overline{\Delta''}}{\Delta} = -J_0 I(I+1).L(x_1,x_2)/(2\varrho_0\Delta^2 J^2)$ holds for axisymmetrical oscillator deformations. $L(x_1,x_2)$ is an expression which was calculated by using the results obtained by A. Migdal (Ref.1). The energy correction in the rotational spectrum is found to be $\delta E \approx -J_0 I^2(I+1)^2 L(x_1,x_2)/(4\varrho_0\Delta^2 J^3)$ by using the results obtained by A. Migdal. In conclusion, the author states that rotation considerably influences pair correlation and that in the estimation of I_0(spin in the transition point) the change of Δ can be neglected only in first approximation. The author thanks V. M. Galitskiy

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Effect of rotation on pair...

and A. B. Migdal. There are 5 references: 3 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Ref. 3: B. Mottelson, J. Valentin, Phys. Rev. Lett., 5, 511, 1960; Ref.4: F. Stephens, R. Diamond, I. Perlman, Phys. Rev. Lett., 3, 435, 1959.

SUBMITTED: February 4, 1961

Card 3/3

GRIN', Yu.T.; PAVLICHENKOV, I.M.

Collective gyromagnetic ratio for odd atomic nuclei. Zhur. eksp.i teor.fiz. 41 no.3:954-958 S '61. (MIRA 14:10)
(Nuclei, Atomic)

39484
S/056/62/043/002/018/055
B102/B104

24 6200

AUTHORS: Grin', Yu. T., Pavlichenkov, I. M.

TITLE: Non-adiabatic corrections to the rotational spectrum of atomic nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki. v. 43, no. 2(8), 1962, 465-472

TEXT: The rotational spectrum of deformed nuclei with $150 < A < 190$ and $A > 226$ has an excitation energy which is related to the nuclear spin by $E_I = E_0 + I(I+1)/2J - BI^2(I+1)^2$, where J is the moment of inertia, and E_0 is the ground-state energy. B is known to increase when the nuclei become spherical; it depends on the interaction between rotation and single-particle and vibrational motions. The authors calculated B in semi-classical approximation on the basis of the microscopic model and determined the contribution to B of the interaction between rotation and single-particle motion. In the case of a nuclear oscillator potential

$$B = J_0^2 \Xi(\nu_1, \alpha, \nu_2)/20\gamma_0 \omega^2 J^4,$$

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Non-adiabatic corrections to the ...

and in the limiting case of large Δ, $B = C_1 J_0^2/\varkappa_0 - {}^2 J_{f1}^4$; if the nuclear deformation is small ($\beta \to 0$), $B = C_2/(\varkappa_0 \Delta^2)^2 \sim 1/\beta^4$. Δ denotes the energy gap, J_0 the solid-state moment of inertia, and J_{f1} the ideal-fluid moment of interia of the nucleus, $\varkappa_1$ and $\varkappa_2$ are the energy differences of the transitions: $\varkappa_{1(2)} = (\varkappa_z - (+)\varkappa_y)/2$; $\varkappa_0$ is the total level density at the Fermi surface, and Φ is a tabulated function ($0 < \Phi < 1$). Conclusions: If pair correlation is taken into account, the contribution to B of the interaction between rotation and single-particle motion is much greater than in the case of non-interacting particles and may reach values which are experimentally observable. If B is given as the sum of the B's of neutron and proton

$$B = B_n + B_p = \frac{J_0^2}{2\Delta^4}\left[\left(\frac{N}{A}\right)^2 \frac{\Phi(x_n)}{\Delta_n^2 \rho_{0n}} + \left(\frac{Z}{A}\right)^2 \frac{\Phi(x_p)}{\Delta_p^2 \rho_{0p}}\right]. \qquad (19)$$

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S/056/62/043/002/018/033
B102/B104

Non-adiabatic corrections to the ...

$$\gamma_{oN} = \frac{3}{76} A(A/N)^{2/3} \text{ MeV}^{-1} ,$$

the agreement with experimental results is only qualitative. Even with strong deformations the experimental value is 2-5 times greater than 2. There are 2 figures and 3 tables.

SUBMITTED: January 6, 1962

Card 3/3

43377
S/056/62/043/005/041/058
B125/B104

AUTHOR: Grin', Yu. T.

TITLE: The moments of inertia of a heated nucleus and the angular anisotropy of fission fragments

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 5(11), 1962, 1880 - 1884

TEXT: Using results of A. B. Migdal (ZhETF, 37, 249, 1959) the moment of inertia with respect to the axis i was found as a function of the excitation energy of a nucleus for T ≠ 0:

$$J_i = -\sum_{12} |M_i|^2_{12} (G_1 G_2 - F_1 F_2) =$$

$$= \sum_{12} \left[\frac{(u_1 v_2 - v_1 u_2)^2 \left(\mathrm{th}\frac{E_1}{2T} + \mathrm{th}\frac{E_2}{2T} \right)}{2(E_1 + E_2)} + \frac{(u_1 u_2 + v_1 v_2)^2 \left(\mathrm{th}\frac{E_1}{2T} - \mathrm{th}\frac{E_2}{2T} \right)}{2(E_1 - E_2)} \right] |M_i|^2_{12}. \quad (3).$$

Omitting the part that is associated with the change in the pair correlation owing to rotation, and passing from the summation to the integral,

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The moments of inertia of a...

one obtains

$$J_{\parallel} = \frac{1}{4T}\int_{-\infty}^{+\infty} \frac{d\varepsilon}{\mathrm{ch}^2\left(\sqrt{\varepsilon^2+\Delta^2}/2T\right)} \sum_1 |M_z|_{11}^2 \delta(\varepsilon_1) = \frac{2\Delta}{T}\sum_{m=1}^{\infty}(-1)^{m+1} m K_1\left(\frac{m\Delta}{T}\right) J_{\parallel}^0. \quad (5)$$

$J_{11}^0 = \sum_1 |M_z|_{11}^2 \delta(\varepsilon_1)$ is the moment of inertia of the rigid body with respect to the z-axis, K_1 is a cylindrical function, Δ is a quantity determining the pair correlation, which depends on temperature in a known manner. For the first time, Eq. (5) was found by V. Strutinskii (Compt. Rend. Congrès Intern. Phys. Nucl., Paris, 1959, p. 617) in a quasiclassical way. For $T \ll \Delta$, the expression for $J_{\parallel}$ which follows from (5) by way of an asymptotic expression for K_1, approaches zero according to an exponential law. Near the temperature T_c of phase transition the equations

$$J_{\parallel} = \left[1 - \left(\frac{\Delta}{2T}\right)^2 \int_0^{\infty} \left(\frac{\mathrm{th}\, x}{x}\right)^2 dx\right] J_{\parallel}^0,$$
$$J_{\parallel} = \left[1 - 0{,}9\left(1 - \frac{T}{T_c}\right)\right] J_{\parallel}^0 \quad (7)$$

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are valid. At $\Delta = 0$ or at $T = T_c$, $J_{||} = J_{||}^0$ and $J_{||}$ jumplike assumes the value of 0 at T=0. The thermodynamic formulas can be used only when $T \gg 1/\varrho_0$, where ϱ is the density of the levels on the Fermi surface. The operator M_x of the projection of the angular momentum upon the x-axis contains non-diagonal elements. With $d = \epsilon_1 - \epsilon_2$, the formula

$$J_\perp = \left\{1 - \frac{1}{d_1^2 + d_2^2}\left[d_{2g}^2\left(\frac{d_1}{2\Delta}\right)\mathrm{th}\frac{\sqrt{\Delta^2 + d_1^2/4}}{2T} + d_{1g}^2\left(\frac{d_1}{2\Delta}\right)\mathrm{th}\frac{\sqrt{\Delta^2 + d_0^2/4}}{2T}\right]\right\} J_\perp^0,$$
$$J_\perp^0 = \sum_{12} |M_x|_{12}^2 \delta(\epsilon_1), \quad d_1 = \omega_z - \omega_x, \quad d_2 = \omega_x + \omega_z. \tag{9}$$

is derived by the usual quasiclassical method assuming a vector potential, ω_x and ω_z are the oscillator frequencies with respect to the x-axis and z-axis. The effective moment of inertia $J_{eff} = (1/J_{||} - 1/J_\perp)^{-1}$ determines the angular anisotropy of the fragments flying off. Fig. 2 shows $J_{eff}T/(J_{eff}T_c)$ as a function of the excitation energy, as calculated from

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(5), (9), and

$$E^{\circ} = TS/2 + \rho_0 (\Delta_0^2 - \Delta^2)/4. \quad (10).$$

Δ and S were obtained from the theory of superconductivity by means of the formulas

$$S = \frac{2\Delta^2 p_0}{T} \sum_{m=1}^{\infty} (-1)^{m+1} K_2\left(\frac{m\Delta}{T}\right), \quad (11)$$

$$\ln\left(\frac{\Delta_0}{\Delta}\right) = 2 \sum_{m=1}^{\infty} (-1)^{m+1} K_0\left(\frac{m\Delta}{T}\right). \quad (12).$$

The theoretical and the experimental data on the angular distribution of the fission fragments can be matched when the effects of pair correlation are consistently taken into account. There are 2 figures.

SUBMITTED: June 8, 1962

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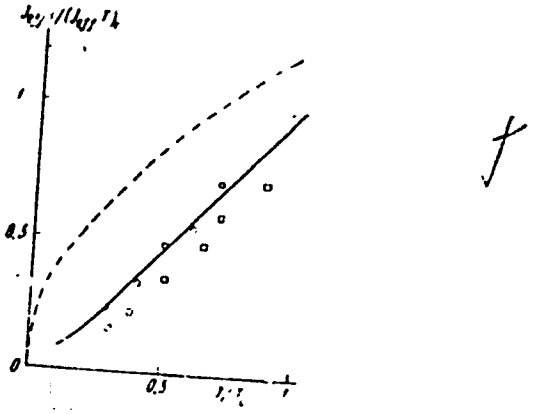
S/056/62/043/005/041/058
B125/B104

Fig. 2. $J_{eff}{}^{T}/(J_{eff}{}^{T}{}_{c})$ as a function of the excitation energy. The solid curve corresponds to the theory developed in the present paper. The dotted line was determined for a Fermi gas. The experimental points were taken for $E_c^* = 10$ Mev (o) and $E_c^* = 8$ Mev (□).



Card 5/5

L 16510-65 EWT(1)/EWT(m) DIAAP/IJP(c)/SSD/AFWL
ACCESSION NR: AP5000343 S/0056/64/047/005/1847/1854

AUTHOR: Grin', Yu. T.; Pavlichenkov, I. M.

TITLE: Rules for the intensities of electromagnetic transitions in deformed nuclei

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5, 1964, 1847-1854

TOPIC TAGS: electromagnetic transition, deformed nucleus, selection rule

ABSTRACT: To ascertain whether the deviations from the Alaga rule can be caused by factors other than the Coriolis forces in the deformed nucleus, the authors compare experimental data with proposed theoretical formulas, using concrete values of structure-dependent parameters calculated on the basis of existing nuclear models, and determine the ratios of the intensity of the electromagnetic single-

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particle transitions in deformed odd nuclei. It is shown that the corrections to the wave functions of the nucleus, due to the coupling between the rotation and the internal motion (Coriolis force), can explain the observed deviations from the Alaga rule and the asymmetry in the behavior of the electric dipole transitions with $\Delta K = 0$ and $\Delta K = \pm 1$. Comparison of the developed theory and experiments show that the observed deviations from the Alaga rule are essentially due to the Coriolis forces. The limits of applicability of the simple phenomenological description developed in this paper depend on the accuracy of the experiments and of the data reduction. "The authors express deep gratitude to A. M. Demidov for help in the selection and analysis of the experimental data." Orig. art. has: 12 formulas and 4 tables.

ASSOCIATION: None

SUBMITTED: 11May64 ENCL: 00

L 16510-65
ACCESSION NR: AP5000343

SUB CODE: NP, EM NR REF SOV: 001 OTHER: 012

Card 3/3

L 48109-65 EWT(1)/EWT(m)/EWG(m) Peb DIAAP JW

ACCESSION NR: AP5011215 UR/0367/65/001/003/0420/0425

AUTHOR: Grin', Yu. T.; Strutinskiy, V. M.

TITLE: Level densities and thermodynamic functions of atomic nuclei with regard to pair correlation effects

SOURCE: Yadernaya fizika, v. 1, no. 3, 1965, 420-425

TOPIC TAGS: nucleus, correlation, Fermi gas, nuclear physics, nuclear level, even even nucleus

ABSTRACT: Thermodynamic functions, level densities, and moments of inertia of even-even deformed nuclei are calculated, taking account of the effects of pair correlation over the entire range of excitation energies where thermodynamic considerations are applicable--for energies approximately equal to 3-4 Mev and above. Existence of different pair correlation values for neutrons and protons is recognized. A comparison is made between experimentally determined values of neutron and proton pair correlation energies and those found from the formulas introduced here. The experimental values are known to within 20%; the theoretically derived values differ from them by less. Hence by proper choice of pairing correlation energies, values obtained from the formulas derived here for nuclear level density

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L 48109-65
ACCESSION NR: AP5011215

at given neutron binding energy can be put in agreement with experimental results. The basic equation is

$$\rho(E, I, \Pi) = \rho(E) \frac{2I+1}{2\sqrt{2\pi}(IT)^{3/2}} \exp\left(-(I+1/2)^2/2IT\right).$$

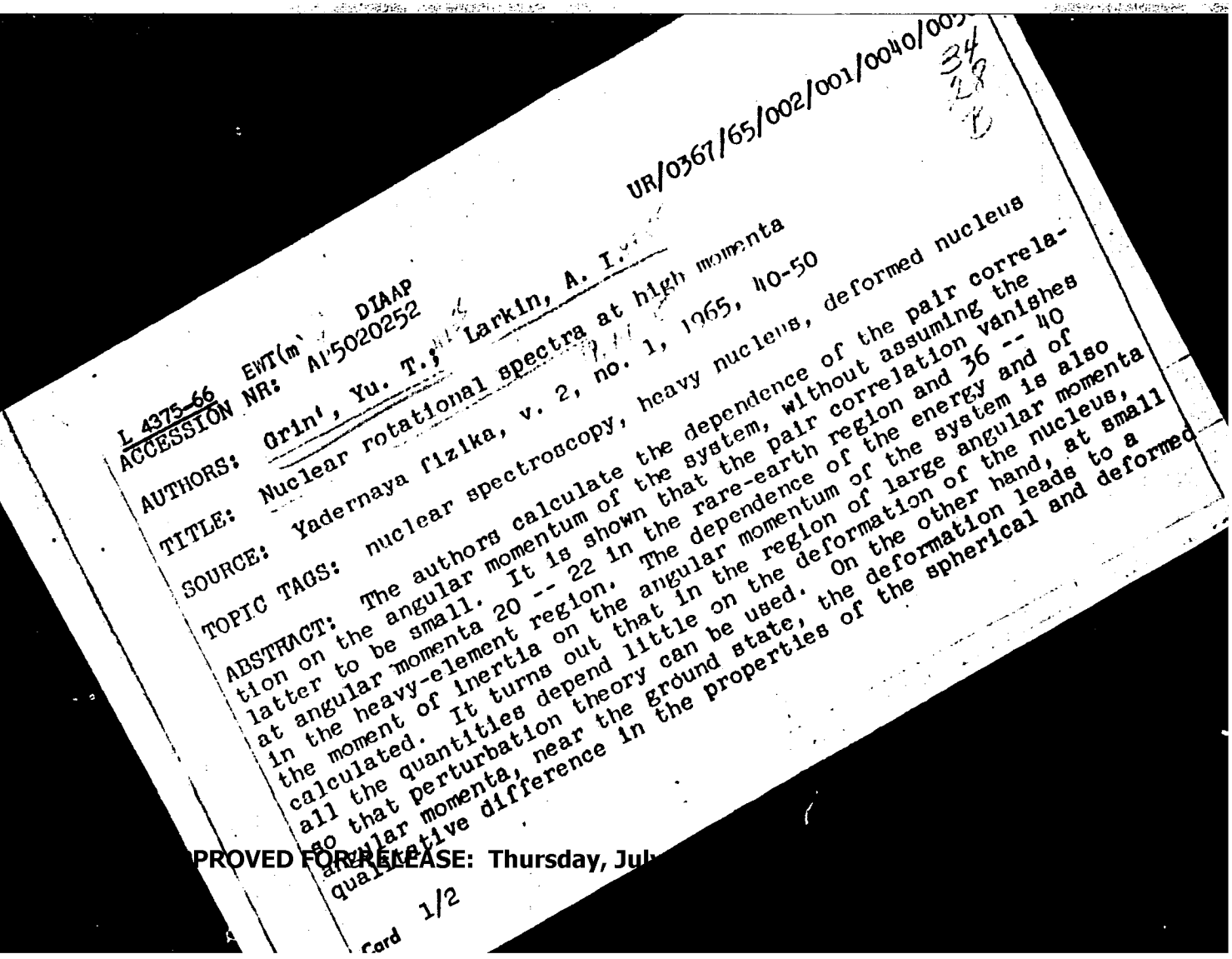
The anomaly in the nuclear level density that is associated with the phase transition is found to occur in an interval no smaller than 1.5-2 Mev. In this interval the nuclear level density changes by far more than the value of the "jump." Thus, it makes no sense to speak of the possibility of observing the phase "jump" or discontinuity in the level density. The level density in the nucleus is more than an order of magnitude less than in the Fermi-gas picture. Thus, additional study of pair correlation is very important for interpretation of the level density in the excited nucleus. Orig. art. has: 1 figure, 1 table, 19 formulas.

ASSOCIATION: none

SUBMITTED: 07Oct64 ENCL: 00 SUB CODE: NP

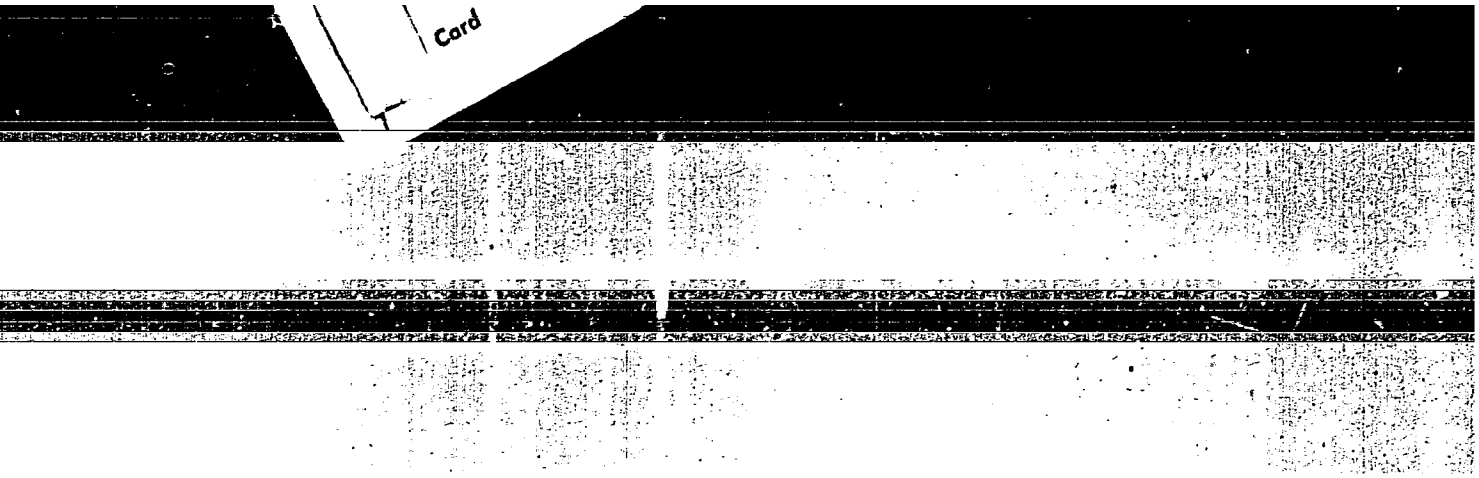
NO REF SOV: 003 OTHER: 011

Card 2/2



L 4375-66 EWT(m) DIAAP UR/0367/65/002/001/0040/00
ACCESSION NR: AP5020252
AUTHORS: Grin', Yu. T.; Larkin, A. I.
TITLE: Nuclear rotational spectra at high momenta
SOURCE: Yadernaya fizika, v. 2, no. 1, 1965, 40-50
TOPIC TAGS: nuclear spectroscopy, heavy nucleus, deformed nucleus
ABSTRACT: The authors calculate the dependence of the pair correlation on the angular momentum of the system, without assuming the latter to be small. It is shown that the pair correlation vanishes at angular momenta 20 -- 22 in the rare-earth region and 36 -- 40 in the heavy-element region. The dependence of the energy and of the moment of inertia on the angular momentum of the system is also calculated. It turns out that in the region of large angular momenta all the quantities depend little on the deformation of the nucleus, so that perturbation theory can be used. On the other hand, at small angular momenta, near the ground state, the deformation leads to a qualitative difference in the properties of the spherical and deformed

Card 1/2



APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051683(

L 4375-66
ACCESSION NR: AP5020252

nuclei. At small angular momenta the pair correlation causes the moment of inertia to decrease by a factor 2 -- 3 compared with the rigid-body value. With increasing angular momentum, the moment of inertia increases and reaches its rigid value at some critical angular momentum. This corresponds to a second-order phase transition in an infinite system. Above the critical angular momentum, the moment of inertia remains that of a rigid body and its dependence on the angular momentum is much weaker than below the critical momentum, being determined only by the stretching of the nucleus by the rotation. The theory developed is compared with experiment and a qualitative agreement is noted. 'The authors thank L. P. Gor'kov and A. B. Migdal for useful discussions.' Orig. art. has: 2 figures and 54 formulas.

ASSOCIATION: None

SUBMITTED: 19Feb65 ENCL: 00 SUB CODE: NP, OP

NR REF SOV: 006 OTHER: 006

Card 2/2

MALAKHOVSKIY, Yu.Ye.; MOLODYKO, N.P. GRIN', Z.A.

Bone marrow transplantation in acute leukemia in children. Probl. gemat.i perel.krovi no.9:21-26 '61. (MIRA 14:9)

1. Iz detskogo otdeleniya (zav. N.P. Molodyko) Kemerovskoy oblastnoy bol'nitsy (glavnyy vrach T.A. Litkova) i Oblastnoy stantsii perelivaniya krovi (glavnyy vrach Ye.S. Davydova).
(MARROW--TRANSPLANTATION) (LEUKEMIA)

GRINARU, Ion

(1)

RUMANIA

MARINESCU, Mintoi

Corresponding Member of the Academy of the RPR

Bucharest, Studii si Cercetari de Energetica/Seria A Energetica Generala si Electroenergetica, No 2, 1962, pp 337-361.

"On the Effect of Electromechanical Hysterosis. A New Process of Transforming Electric Power in Mechanical Work and Application in the Construction of New Types of Electric Machines."

Co-authors:

GAVRILIU, Nicolae

GRINARU, Ion.

SAVUKYNAS, B.; VANAGAS, A.A; VITKAUSKAS, V.; VOSYLYTE, K.; ERMANYTE, I.; GRINAVECKIENE, E., otv. red.; SENKUS.J., red.; LUKOSEVICIUS, St., tekhn. red.

[Names of rivers and lakes of the Lithuanian S.S.R.] Lietuvos TSR uiu ir ezeru vardynas. Vilnius, Valstybine politines ir mokslines literaturos leidykla, 1963. 225 p. (MIRA 16:11)

1. Lietuvos TSR Mokslu Akademija. Vilna. Lietuviu kalbos ir literaturos institutas.
(Names, Geographical--Dictionaries)

KORSHAKOVA, A.S.; BOLDYREV, T.Ye.; ALEKSANYAN, A.B.; SHATROV, I.I.; LEYTMAN, L.V.; FROLOV, V.I.; SEMINA, N.A.; DEVOYNO, L.V.; SIZINTSEVA, V.P.; BATURINA, L.M.; ABAKAROV, U.A.; GRINAVTSEVA, V.P.; MEDZHIDOV, V.; KORSHUNOVA, N.A.

Studies on the reactogenic properties of Gamaleia IEM polyvaccine. Zhur.mikrobiol.,epid.i immun. 30 no.11:37-41 N '59. (MIRA 13:3)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(DYSENTERY BACILLARY immunol.)
(TYPHOID immunol.)
(PARATYPHOID FEVERS immunol.)
(TETANUS immunol.)
(VACCINATION)

NERETIN, V.Ya., st. nauchn. sotr., red.; GRIMAVTSEVA, V.P., red.; GOROKHOVA, N.A., red.; SHEREMET, S.I., red.; OSTROVSKAYA, L.M., red.

[Progress in the diagnosis and treatment of nervous diseases; transactions of the Institute] Uspekhi v diagnostike i lechenii nervnykh zabolevanii; trudy instituta. Pod red. V.IA. Neretina.. Moskva, 1963. 358 p. (MIRA 17:6)

1. Moscow. Oblastnoy nauchno-issledovatel'skiy institut.

GRINBARG, A.G., dotsent

Ultrahigh-frequency therapy in some diseases of the peripheral nervous system. Kaz.med.zhur. 40 no.5:63-65 S-O '59.
(MIRA 13:7)

1. Iz fizioterapevticheskogo otdeleniya (zav. - dotsent A.G. Grinbarg) Kazanskogo meditsinskogo instituta.
(NERVOUS SYSTEM--DISEASES) (ELECTROTHERAPEUTICS)

BUYANOVSKAYA, A.A.; GRINBART, S.B.; ZAYTSEV, Yu.P.; VOLK, D.T.

Hydrobiological conditions and food reserves of the Dniester Liman.
Trudy probl.i tem.sov.no.1:93-99 '51. (MLRA 9:7)
(Dniester Liman--Biology)

GRIGOR'YEV, S.S., dots., kand.biol.nauk

Zoobenthos in the limans of Izmail Province (Shabolat, Burnas, Aliboy, Shagany) and its food value. Mat. po gidrobiol. i rybol.lim.severozap. Pribalkh. [no.1]:35-53 '52. (MIRA 12:7)
(Izmail Province--Marine fauna)

GRINBART, S.B.

Zoobenthos of the Dniester Liman and the lower course of the Dniester River and its food value. Mat. po gidrobiol. i rybol. lim. severozap. Prichor. no.2:81-102 '53. (MIRA 12:8)
(Dniester River--Fresh-water fauna)
(Dniester Liman--Fresh-water fauna)

USSR / Farm Animals. Swine Q-4

Abs Jour: Ref Zhur-Biol., No 3, 1958, 12132

Author : Grinbart S. B., Zambriborshch F. S., Gorobets G. P.
Inst :
Title : On the Utilization of Mytilus for Feeding Swine (Ob ispol'zovanii midiy dlya kormleniya sviney)

Orig Pub: V pomoshch' s. kh. i rybovodstvu, Vyp. 1. Odessa, 1956, 21-22

Abstract: Feeding of porkers of the test group with Mytilus mussels, both in a boiled and raw form, 1 to 4 kg. daily per head, has brought about their weight increase up to 770-800 g. (200-250 g. more than in control animals). The utilization of Mytilus, 1 kg. daily for weanlings and 2 kg. for porkers, is recommended.

Card 1/1

GRINBART, S.B., dots.

Immigration and dispersal of the crab Rhitropanopeus harrissii in limans of the northern part of the Black Sea region. Pratsi Od. un. Ser.biol.nauk no.8(vol.147):143-146 '57.
(MIRA 12:4)

(Black Sea region—Crabs)

GRINBART, S.B. [Hrinbart, S.B.]; RYABCHIKOV, P.I., [Riabchykov, P.I.]

Materials on the biology, distribution, and destructive activity of shipworms (Teredo navalis L.) in the northwestern part of the Black Sea. Nauk.zap.Od.biol.sta. no.1:140-152 '59. (MIRA 14:7)
(Black Sea--Shipworms)

GRINBART, S.B.

Studying the fauna in the Black Sea region limans, its genesis and the appearance of new elements. Trudy Od. un. 152. Ser. geol. i geog. nauk no.9:167-173 '62. (MIRA 17:6)

GRINBAUM, A.F.

Pontoon made of corrugated sheets used for five ton capacity floating cranes. Biul.tekh.-ekon.inform. no.7:75-76 '58. (MIRA 11:9)
(Cranes, derricks, etc.)

GRINBAUM, A.F., inzh.; KREYN, Z.A., inzh.; LEPILOV, V.A., inzh.

Stability of freight and passenger ships on inland waterways.
Rech. transp. 17 no.8:48-52 Ag '58. (MIRA 11:10)
(Stability of ships)

GRINBAUM, A.F., inzh.; KREYN, Z.A., inzh.; LEPILOV, V.A., inzh.

Using gauffered plates on pontoons under cranes with a lead capacity of five tons. Sudostroenie 25 no.3:56-58 Mr '59. (MIRA 12:5)

(Pontoons) (Cranes, derricks, etc.)

DORMIDONTOV, Nikolay Konstantinovich, doktor tekhn. nauk, prof.; LYSENKO, Lavr Georgiyevich, kand. tekhn. nauk; PAVLOV, Aleksandr Ivanovich, dots., kand. tekhn. nauk; TERENT'YEV, Georgiy Borisovich, kand. tekhn. nauk; SHMUYLOV, Nikolay Leonidovich, st. prepod. inzh.; Prinimal uchastiye KUZNETSOV,V.P., kand.tekhn.nauk;dots.; SMOLYAKOV,B.N.,dots.,retsenzent;GRINBAUM,A.F., inzh.retsenzent;VARENOV,P.G.,inzh.,retsenzent;ASHIK,V.V.,red.;VOLCHOK, K.M., tekhn.red.

[Design and arrangement of ships for inland navigation]Konstruktsiia i ustroistvo sudov vnutrennego plavaniia. Pod obshchei red. N.K.Dormidontova. Leningrad, Izd-vo "Rechnoi transport," Pt.2. [Metal ships]Metallicheskie suda. 1962. 271 p. (MIRA 15:12)

1. Kafedra arkhitektury i proyektirovaniya korablya Leningradskogo instituta vodnogo transporta (for Dormidontov, Lysenko, Pavlov, Terent'yev, Shmuylov, Kuznetsov).
(Naval architecture)
(Ships, Iron and steel)

GRINBAUM, F.T.

DECEASED
C' 1961

1962/5

SEE ILC

MICROBIOLOGY

GRINBAUM, F.T.

"Infectious diseases of man and their pathogens, edited by A.Grumbach, W.Kikuth. Reviewed by F.T.Grinbaum. Zhur.mikrobiol.epid.i immun. 31 no.9:146-150 S '60. (MIRA 13:11)
(COMMUNICABLE DISEASES) (GRUMBACH, A.)
(KIKUTH, W.)

PLETSITYI, Dmitriy Frantsevich; GRINBAUM, F.T., red.; SENCHILO, K.K., tekhn. red.

[Dynamics of immunity] Dinamika immuniteta. Moskva, Medgiz, 1961. 146 p. (MIRA 15:3)
(IMMUNITY)

BUGROVA, V.I., kand. med. nauk; VINOGRADOVA, I.N., kand.biol. nauk; D'YAKOV, S.I., kand. med. nauk; ZHDANOV, V.M., prof.; ZHUKOV-VEREZHNIKOV, N.N., prof.; ZEMTSOVA, O.M., kand. med. nauk; IMSHENETSKIY, A.A., prof.; KALINA, G.P., prof.; KAULEN, D.R., kand. med. nauk; KOVALEVA, A.I., doktor med. nauk; KRASIL'NIKOV, N.A., prof.; KUDLAY, D.G., doktor biol. nauk; LEBEDEVA, M.N., prof.; PERETS, L.G., prof. [deceased]; PEKHOV, A.P., doktor biol. nauk; PLANEL'YES, Kh.Kh., prof.; POGLAZOVA, M.N., kand. biol. nauk; PROZOROV, A.A.; SINITSKIY, A.A., prof.; FEDOROV, M.V., prof. [deceased]; SHARINA-VAGINA, V.I., kand.biol. nauk; VYGODCHIKOV, G.V., prof., zamestitel' otv. red.; ADO, A.D., prof., red.; BAROYAN, O.A., prof., red.; BILIBIN, A.F., prof., red.; BOLDYREV, T.Ye., prof., red.; VASHKOV, V.I., doktor med. nauk, red.; VYAZOV, O.Ye., doktor med. nauk, red.; GAUZE, G.F., prof., red.; GOSTEV, V.S., prof., red.; GORIZONTOV, P.D., prof., red.; GRINBAUM, F.T., prof., red. [deceased]; GROMASHEVSKIY, L.V., prof., red.; YELKIN, I.I., prof., red.; ZASUKHIN, L.N., doktor biol. nauk, red.; ZDRODOVSKIY, P.F., prof., red.; KAPICHNIKOV, M.M., kand. med. nauk, red.; KLEMPARSKAYA, N.N., prof., red.; KOSYAKOV, P.N., prof., red.; LOZOVSKAYA, Ye.S., kand. med. nauk, red.; MAYSKIY, I.N., prof., red.; MUROMTSEV, S.N., prof., red. [deceased];

(Continued on next card)

LUGKOVA, V.I.---(continued) Card 2.
NIKITIN, M.Ya., red.; NIKOLAYEVA, T.A., red.; PAVLOVSKIY, Ye.N., akademik, red.; PASTUKHOV, A.P., kand. med. nauk, red.; PETRISHCHEVA, P.A., prof., red.; POKROVSKAYA, M.P., prof., red.; POPOV, I.S., kand. med. nauk, red.; ROGOZIN, I.I., prof. red.; RUDNEV, G.P., prof., red.; SERGIYEV, P.G., prof., red.; SKRYABIN, K.I., akad., red.; SOKOLOV, M.I., prof. red.; SOLOV'YEV, V.D., prof., red.; TRIBULEV, G.P., dotsent, red.; CHUMAKOV, M.P., prof., red.; SHATROV, I.Y., prof., red.; TIMAKOV, V.D., prof., red.toma; TROITSKIY, V.L., prof., red. toma; PETROVA, N.K., tekhn.red.;

[Multivolume manual on the microbiology, clinical aspects, and epidemiology of infectious diseases] Mnogotomnoe rukovodstvo po mikrobiologii klinike i epidemiologii infektsionnykh boleznei. Otv. red. N.N.Zhukov-Verezhnikov. Moskva, Medgiz. Vol.1. [General microbiology] Obshchaia mikrobiologiia. Otv. red. N.N.Zhukov-Verezhnikov. 1962. 730 p. (MIRA 15:4)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Zhdanov, Zhukov-Verezhnikov, Vygodchikov, Bilibin, Vashkov, Gromashevskiy, Zdrodovskiy, Rudnev, Sergiyev, Chumakov, Timakov, Troitskiy).

(Continued on next card)

BUGROVA, V.I.---(continued) Card 3.

2. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy, Krasil'nikov). 3. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Planel'yes, Baroyan, Boldyrev, Gorizontov, Petrishcheva, Rogozin). 4. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Muromtsev).

(MICROBIOLOGY)

GRINBAUM, I.I.

Conductometric analysis in artesian wells. Zap. Uz. otd. Vses. min. ob-va no.11:65-72 '57. (MIRA 11:6)
(Water, Underground)

GRINBAUM, I. I.: Master Geolog-Mineralo Sci (diss) -- "Laminar determination of the rate of filtration of ground water from separate wells using a resistance meter". Tashkent, 1958, published by SAGU. 15 pp (Min Higher Educ USSR, Central Asia State U im V. I. Lenin), 150 copies (KL, No 4, 1959, 123)

GRINBAUM, I.I.

Layer-by-layer determination of the seepage coefficient for rocks from isolated wells by means of a resistivity meter in flooding. Vop. rasved. geofiz. no.3:191-203 '64. (MIRA 18:2)

[redacted]

GUBKIN, [illegible]

[Geophysical methods of determining the filtration properties of rocks] Geofizicheskie metody opredeleniia fil'tratsionnykh svoistv gornykh porod. Moskva, Nedra, 1965. 186 p. (MIRA 18:9)

GRINBAUM, M.

"First grader." Radio no.5:33-35 My '60. (MIRA 13:12)
(Electronic calculating machines)

GRINBAUM, M.I.

Model of an electronic calculating machine. Fiz. v shkole 20 no.6:56-62 N-D '60. (MIRA 14:2)

1. 122-ya srednyaya shkola, Moskva.
(Electronic calculating machines)

GRINBAUM, M.I. (Moskva)

Homemade physical instruments. Fiz. v shkole 21 no.2:87-89 Mr-Ap '61. (MIRA 14:8)

(Physical instruments)

GRINBAUM, M.I.

Models of flaw detectors. Fiz.v shkole 21 no.4:91-96 Jl-Ag '61. (MIRA 14:10)

1. 722-ya shkola, Moskva.
(Testing machines--Models)

GRINBAUM, M.I.

Model for illustrating the reflex activity of an organism. Fiz. v shkole 23 no.3:73-79 My-Je '63. (MIRA 16:12)

1. 842-ya shkola, Moskva.

GRINBAUM, M.I.

Measuring the energy of photoelectrons by the method of damping voltage. Fiz. v shkole 23 no.5:58-59 S-O '63. (MIRA 17:1)

1. 842-ya shkola, Moskva.

GRINBAUM, N.B.; SMIRNOVA, A.M.

Types of curves of streptococcal antigen in patients with a first attack of rheumatic fever. Pediatriia no.8:42-47 '61. (MIRA 14:9)

1. Iz kafedry pediatrii (zav. - prof. E.A. Gornitskava) I Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova i otdela mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof. V.I. Ioffe) Instituta eksperimental'noy meditsiny AMN SSSR.
(RHEUMATIC FEVER) (STREPTOCOCCUS)

GRINBAUM, N.B.; SMIRNOVA, A.M.

Streptococcal antigen and antibodies in the sera of children with a first attack of rheumatic fever. Vop. okh. mat. i det. 6 no.9: 32-36 S '61. (MIRA 14:9)

1. Iz kafedry pediatrii (zav. - prof. E.A.Gornitskaya) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova i otdela mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof. V.I.Ioffe) Instituta eksperimental'noy meditsiny AMN SSSR.
(RHEUMATIC FEVER) (STREPTOCOCCUS)

POTANIN, N.V.; GRINBAUM, N.B.

"Clinical aspects and treatment of capillarotoxicosis in children" by Z.A.Danilina. Reviewed by N.V.Potanin, N.B. Grinbaum. Vop.okh.mat.i det. 7 no.8:92-94 Ag '62. (MIRA 15:9)
(PURPURA (PATHOLOGY))

GRINBAUM, N.B. (Leningrad)

On the role of hemolytic streptococci in the pathogenesis of acute diffuse nephritis; review of foreign literature. Vop. okh.mat. i det. 7 No.12:39-40 D'62. (MIRA 16:7)
(KIDNEYS—DISEASES) (STREPTOCOCCAL INFECTIONS)

GRINBAUM, N.B., kand. med. nauk; MINKOVICH, A.Ye.

Late observations of children following recovery from kidney disease. Sov. med. 28 no.8:118-121 Ag '65. (MIRA 18:9)

1. Kafedra pediatrii (zav. - prof. E.A.Gornitskaya) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova i detskaya bol'nitsa No.1 Oktyabr'skogo rayona Leningrada (glavnyy vrach Ye.N. Speranskaya).

GRINBAUM, Ya.; FEL'DSHTEYN, V.

Movable dryers for ear corn. Muk.-elev. prom. 25 no.4:30 Ap '59. (MIRA 13:1)

1.Zastavskiy khlebopriyemnyy punkt (for Grinbaum). 2.Odesskoye oblastnoye upravleniye Goskhlebinspektsiya (for Fel'dshteyn). (Corn (Maize)--Drying))

GRINBERG, A.

USSR/Chemical Technology. Chemical Products and their Application. J-12
Glass. Ceramics. Construction Materials.

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27779.

Author : A. Grinberg.
Inst :
Title : Reconstruction of Recuperators of Rotating Furnaces.

Orig Pub: Tsement, 1956, No 5, 29.

Abstract: The measures carried out at the "Proletariy" cement works with a view to improve the work of recuperators are described.

Card : 1/1

GRINBERG, A., inshener-mekhanik.

Standardising small cylinder capacity motorcycles. Za rul. 14 no.7:6 O '56. (MLRA 10:3)

(Motorcycles)

GRINBERG, A.

Book on a progressive method of work planning ("Work planning in the enterprises of the meat industry" by V.P. Shipov. Reviewed by A. Grinberg). Mias. ind. SSSR 28 no.3:54-55 '57. (MLRA 10:6)

1. Kiyevskiy myasotrest.
(Meat industry--Production standards)
(Shipov, V.P.)

GRINBERG, A

GRINBERG, A.

Shortcomings in the planning of production costs. Mias. ind. SSSR 28 no.5:49-50 '57. (MIRA 11:1)

1. Kiyevskiy myasotrest. (Meat industry)

SARBAYEV, M.; GRINBERG, A.

Utilization of workers during the interseason period. Mias.ind. SSSR 33 no.3:31-32 '62. (MIRA 15:7)

1. Kiyevskiy myasokombinat.
(Meat industry)

GRINBERG, A.; SHCHUR, V.

Problems of changing record keeping in corn milling. Muk.-elev. prom. 26 no.6:23-24 Je '60. (MIRA 13:12)

1. Zamestitel' nachal'nika Nikolayevskogo oblastnogo upravleniya Goskhlebinspektsii (for Grinberg). 2. Starshiy bukhgalter Komratskogo khlebopriyemnogo punkta Moldavskoy SSR.
(Corn milling)

GRINBERG, A.; MOTRENKO, N.

Extending mechanization in shops. Mias.ind.SSSR 31 no.3:41-42 '60. (MIRA 13:9)

1. Kiyevskiy myasokombinat.
(Kiev--Meat industry--Equipment and supplies)

GRINBERG, A.A., inzh.; ZHILIN, A.P., inzh.; SERGOVANTSEV, V.T., kand.tekhn. nauk; IOGANSON, N.Ye., inzh.; AL'TSHULLER, S.Z., inzh.

Power supplying circuits for electric drives of fuel feeding systems. Elek.sta. 31 no.6:87-89 Je '60. (MIRA 13:7)
(Electric power plants--Equipment and supplies)
(Stokers, Mechanical--Electric driving)

GRINBERG, A.A.

GROSMAN, M.N.; GRINBERG, A.A.

Case of patent ductus arteriosus and aplasia of the left kidney. (MLRA 10:6)
Vrach.delo no.2:191 F '57.

1. Klinika fakul'tetskoy terapii (zav. - prof. M.B.Shchupak) Chernovitskogo meditsinskogo instituta.
(KIDNEYS--ABNORMITIES AND DEFORMITIES)
(DUCHUS ARTERIOSUS--ABNORMITIES AND DEFORMITIES)

DRAGANYUK, K.A.; ROZNERITSA, L.A.; POPUSHOY, G.A., vrach; GRINBERG, A.A.

What practicing physicians talk about. Zdravookhranenie 2 no.3:3-6 My-Je '59. (MIRA 12:10)

1. Glavnyy vrach Respublikanskogo tuberkuleznogo sanatoriya "Vornicheny" (for Draganyuk). 2. Zamestitel' glavnogo vracha Orgeyevskogo rayona (for Rozneritsa). 3. Sel'skiy vrachebnyy uchastok s.Kangaz Tarakliyskogo rayona (for Popushoy). 4. Glavnyy vrach Vulkaneshtskogo rayona (for Grinberg).
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Experimental ventricular fibrillation and its elimination. (MIRA 11:9)
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Hemodynamics and respiration during experimental hypothermia.
Eksper. khir. 3 no.5:56 S-O '58 (MIRA 11:11)
(HYPOTHERMIA)
(RESPIRATION)
(CARDIOVASCULAR SYSTEM)

BAKULEV, A.M., akad.; SAVEL'YEV, V.S., doktor med.nauk; RYNEYSKIY, S.V., kand.med.nauk; GRINBERG, A.A.

Some surgical problems in treating atherosclerotic occlussions of the aortic bifurcation. Khirurgiia no.8:3-11 Ag '61. (MIRA 15:5)

1. Iz fakul'tetskoy khirurgicheskoy kliniki imeni S.I. Spasokukotskogo (zav. - akad. A.N. Bakulev) II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni N.I. Pirogova.
(AORTA--DISEASES) (ARTERIOSCLEROSIS)

GRINBERG, A.A.

Some problems of rural hygiene. Zdravookhranenie 4 no.6:10-11 N-D '61. (MIRA 15:2)

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(HYGIENE, RURAL)

KOMAROV, B.D., kand. med. nauk; GRINBERG, A.A.; ZATEVAKHIN, I.I.

Angiography in the diagnosis of arterial diseases of the lower extremities. Klin. khir. no.10:41-45 O '62. (MIRA 16:7)

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(ANGIOGRAPHY) (ARTERIES—DISEASES)
(EXTREMITIES, LOWER—DISEASES)

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Clinical aspects and surgical treatment of occlusion of the aorta and iliac arteries. Grud.khir. 4 no.6:114-119 N-D'62. (MIRA 16:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki imeni S.I. Spasokukotskogo (dir. - akademik A.N.Bakulev) II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova (dir. - dotsent M.G.Sirotkina). Adres avtorov: Moskva V-49, Leninskiy prospekt, d.8, I Gorodskaya Moskovskaya bol'nitsa.
(AORTA — DISEASES) (ILIAC ARTERY—DISEASES)
(THROMBOSIS)

VAYSBORD, N.A.; GRINBERG, A.A., kand. med. nauk

Pelvic arteriography; a review of literature. Akush. i gin. 40 no.2:84-89 Mr-Ap '64. (MIRA 17:11)

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BAKULEV, A.N., akademik; KOMAROV, B.D. kand. med. nauk; GRINBERG, A.A.

Aortography in the diagnosis of diseases of the abdominal aorta and the iliac arteries. Vest. rent. i rad. 37 no.5:3-9 S-O '62. (MIRA 17:12)

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BOYCHEVSKAYA, N.O. (Moskva, Bol'shaya Dorogomilovskaya, 1, kv.6); GRINBERG, A.A. KOMAROV, B.D.

Kidney function before and following reconstructive surgery of the abdominal aorta. Vest. khir. 92 no.1:44-47 Ja '64. (MIRA 17:11)

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GRUBERG, A.A. (Moskva, Leningradskiy prospekt, [illegible]); [illegible]
V.I.

Complications in translumbar aortography. Vest. khir. 92 no.4:
130-131 Ap '64 (MIRA 18:1)

1. Iz fakul'tetskoy khirurgicheskoy kliniki imeni S.I.Spasokukotskogo (direktor - akademik A.N. Bakulev) 2-go Moskovskogo meditsinskogo instituta i gorodskoy klinicheskoy bol'nitsy No.1 imeni N.I. Pirogova (glavnyy vrach - zasluzhennyy vrach RSFSR L.D. Chernyshov).

ACC NR: AP6036983 (A,N) SOURCE CODE: UR/0181/66/008/011/3350/3353

AUTHOR: Grinberg, A. A.; Kramer, N. I.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Photoionization of shallow impurity level in semiconductors with participation of phonons

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3350-3353

TOPIC TAGS: light absorption, absorption coefficient, impurity center, photoionization, phonon interaction, electron interaction, temperature dependence

ABSTRACT: The authors consider the absorption of light by shallow impurities in semiconductors. In view of the fact that the experimental coefficient of absorption of photons by shallow impurities does not agree with theory based on direct photon capture, the authors evaluate the effect that phonons play on the photon absorption probability. It is shown that the phonon can impart to the impurity electron a large momentum, and thus make a noticeable contribution to the corresponding ionization probability, in spite of the fact that the electron-phonon interaction itself is small. It is shown further that when the electron energy greatly exceeds the ionization energy the process proceeds predominantly with participation of phonons. In the case

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of low temperature, the absorption coefficient is proportional to the reciprocal of the frequency (ω), whereas without allowance for the phonons it is proportional to $\omega^{-3.5}$. In the case of high temperatures and the scattering is by acoustic phonons, the absorption cross section decreases. Comparison of the theoretical calculations with experimental data confirm the correctness of the calculations. The authors thank A. A. Klyuchikhin and O. V. Konstantinov for a useful discussion. Orig. art. has: 1 figure and 5 formulas.

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Card 2/2

Grinberg A.A.

H-8

USSR/Electronics - Semiconductor Devices and Photoelements

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12382

Author : Grinberg, A.A., Avak'yants, G.M.

Inst :
Title : Contribution to the Theory of Non-Stationary Voltage-Current Characteristics of Diodes with Electron-Hole Junctions.

Orig Pub : Dokl. AN UzSSR, 1956, No 7, 31-36

Abstract : The authors calculate theoretically the transient characteristic of an electron-hole transition upon sharp changeover from the forward to the backward direction. Owing to the barrier capacitance, the voltage on the junction is not established instantaneously, and this superimposes definite requirements on the boundary conditions at the transition. Taking these conditions into account, the authors solve the diffusion equation and obtain the transient

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