GRAYEVSKIY

AUTHOR: Grayevskiy, P. S. 30-12-16/49

TITLE: New Achievements of Indian Science (Novyye dostizheniya indiyskoy nauki)

PERIODICAL: Vestnik AN SSSR, 1957, Vol. 27, Nr 12, pp. 71-75 (USSR).

ABSTRACT: India, which attained her independence after a long and hard struggle, took over a difficult heritage. As a result of a foreign rule which had lasted two centuries, the industrial economy of India lagged far behind other countries. The enormous resources of the country were unexplored and were still less exploited. Also the network of scientific institutes and universities was insignificant and undeveloped. At present the situation is completely changed. The development of old and the establishment of new scientific research institutes and laboratories is being carried out in practice. The first atomic reactor has already begun to operate, and the establishment of two further reactors is in preparation. A large Institute for Nuclear Physics is being built at Bombay. A number of institutes was erected the task of which is the direct cooperation in the development of individual branches of industry. Physical research work was carried out on an up-to-date level. The greatest development took place in the field of spectroscopy, crystal physics, the study of cosmic radiation, and nuclear

Card 1/2

New Achievements of Indian Science.

physics. Such branches of science developed with particular rapidity as are connected with the utilization of natural resources. An example of the rapid development of science in India is the research work carried out for the purpose of the utilization of nuclear physics for peaceful uses. India was also one of the first countries that was prepared to take part in the geophysical year. The research work carried out by Indian scientists in this field comprises practically all problems provided in the international program of observation. A network of stations was established which carry out geomagnetic observations of longitude and latitude, and which study seismological, oceanographic, glaciological and gravitation problems. Knowing that the tasks to be performed can be carried out only with the aid of the scientists of many countries, the scientists of India endeavor to contribute their best in this field in order to warrant success for the geophysical year. The archeology of India has recently been enriches by new and important finds. The university of Calcutta decided, together with the department for archeology, to continue excavations on a large scale. The new achievements of sciences in India show that their development will be carried out with ever increasing zeal. This is manifested convincingly by the attendance of Indian scientists at national conferences as well as by their active participation in numerous international congresses.

AVAILABLE. Library of Congress.
Card 2/2

1. Science—Development—India

L 44601-66 EWT(1)/EWT(m)/EEC(k)-2/T/EWP(k)/EWP(t)/ETI IJP(c) WG/JD/JG

ACC NR: AP6030960 SOURCE CODE: UR/0181/66/008/009/2616/2622

72
B

AUTHOR: Basov, N. G.; Yeliseyev, P. G.; Zakharov, S. D.; Zakharov, Yu. P.; Orayevskiy, I. N.; Pinsker, I. Z.; Strakhov, V. P.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Certain properties of GaAs laser diodes

SOURCE: Fizika tverdogo tela, v. 8, no. 9, 1966, 2616-2622

TOPIC TAGS: solid state laser, semiconductor laser, gallium arsenide, laser, SEMICONDUCTOR DIODE

ABSTRACT: Phenomenological methods were used in an experimental study of certain properties of GaAs laser diodes (loss factor, quantum yield, differential efficiency, gain). The specimens were prepared by the diffusion of zinc into n-type GaAs crystals with electron concentrations of 2×10^{18} cm^{-3}. The cavities consisted of silver mirrors sputtered on polished crystalline surfaces pre-coated with a thin layer of SiO, and the electrical contacts consisted of sputtered metal (Au, Ni, In, Sn) films and fused-in electrodes. The measurements were carried out at 77K and the pulsed output was recorded by a calibrated silicon photodiode. The lowest threshold currents occurred in diodes which were cleaved on all four sides. A threshold current of 25 mamp was attained at the liquid He temperature and at a density of 75 amp/cm^2. C-w operation was observed from diodes with $I_{thr} < 0.5$ amp at 4.2K. The results

Card 1/2

84410
S/056/60/039/[illegible]
B006/B063

24.6900

AUTHOR: Orayevskiy, V. N.

TITLE: Photon-Photon Resonance Scattering

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 4(10), pp. 1049 - 1050

TEXT: The author gives an estimate of the photon-photon resonance scattering cross section for the case where a neutral pion decays into two photons. The estimate is made in consideration of the vacuum of π^0 mesons. The interaction between the electromagnetic field and the pion field is formulated as follows: $L = \eta\varphi\vec{E}\vec{H}f(q^2)$, where η denotes the coupling constant; φ, $\vec{E}$, and $\vec{H}$ are operators of the mesonic and electromagnetic fields; q denotes the four-momentum of the π^0 meson. This formulation differs from that given by Dalitz by the form factor $f(q^2)$ which takes account of the fact that the π^0 meson is smeared. Furthermore, an expression is given for the matrix element of photon-photon scattering via a π^0 meson, the damping of the π^0 meson being taken into account:

Card 1/3

Photon-Photon Resonance Scattering

S/056/60/039/004/0 [illegible]
B006/B063

$S = \eta^2 f^2(q^2)(2\pi)^4(\vec{E}\vec{H})\frac{a(q^2)}{q^2+(m-i\Gamma/2)^2}(\vec{E}'\vec{H}')\delta(q_1+q_2-q_1'-q_2')$, where the fraction denotes the renormalized Green function of the π^0 meson; $\Gamma = t^{-1}$; t is the lifetime of the π^0 meson; the primed quantities denote the four-momenta and field strengths of scattered photons, and the unprimed quantities denote the four-momenta and field strengths of colliding photons. This relation and $t^{-1} = \eta^2 m^3/16\pi$ lead to the following relation for the cross section in the rest system where $\vec{q}_1 + \vec{q}_2 = 0$:

$\sigma = \frac{32\Gamma^2 f(-4\omega^2)a^2(-4\omega^2)}{(m-2\omega)^2+\Gamma^2/4}(\omega/m)^6\frac{1}{(m+2\omega)^2}\int d\Omega$. ω denotes the photon fre[illegible] resonance occurs in the range $\omega_1 = m/2$. Taking $a(-m^2) \approx f(-m^2) = 1$ int[illegible] account, this relation leads to the cross section averaged over the "level" width: $\bar{\sigma}_1 = \frac{\pi}{4\omega_1^2}\arctan 2$. $\bar{\sigma}_1 \approx 0.75 \cdot 10^{-25}$ cm^2 is numerica.ly

Card 2/3

84410

Photon-Photon Resonance ...

S/056/60/039/...
B006/B063

obtained, and $\overline{\sigma}_r \approx 1 \cdot 10^{-27}$ cm^2 is found for energies close to resonance energy if the small "level" width is considered. The author thanks D. V. Volkov for discussions. There is 1 non-Soviet reference.

ASSOCIATION: Novosibirskiy gosudarstvennyy universitet (Novosibirsk State University)

SUBMITTED: May 11, 1960

Card 3/3

CRAYENSKIY, V. N.

Universal Instability of a Magnetically Confined Plasma

A. A. Galeev, V. N. Oraevskiy, and R. Z. Sagdeev
Institute of Nuclear Physics, 1962

Abstract

It is shown that a low pressure plasma ($p << H^2/8\pi$), confined by a magnetic field, is "universally" unstable with respect to local short-wave perturbations which do not distort the magnetic field, for any ratio between the spatial temperature and density gradients $d\ln T/d\ln n$. An analog of a similar "universal" instability in the hydrodynamic approximation is the instability related to finite thermal conductivity along the magnetic field.

Report presented at the Conference on Plasma Stability, Culham, UK, 17-22 Sep 62.

ORAYEVSKIY, V.N. (Novosibirsk)

Stability of ionic longitudinal plasma oscillations in a magnetic field. PMTF no.5:39-41 S-O '62. (MIRA 16:1)
(Plasma oscillations) (Magnetic fields)

S/057/62/032/011/002/014
B104/B102

AUTHORS: Orayevskiy, V. N., and Sagdeyev, R. Z.

TITLE: The stability of steady-state plasma oscillations

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 11, 1962, 1291-1296

TEXT: An investigation is made of the stability of nonlinear waves, called "background", in a plasma. A coordinate system moving with the waves is used, whereby the coefficients describing the small deviations from the background are independent of time the time dependence of the solution can be represented in the form $\exp(i\omega t)$. The problem then is to solve the system of equations $L_i = 0$, where $\hat{L}$ is a differential operator expressible in the form $\hat{L} = \hat{L}_0 + \hat{L}_1$. $\hat{L}_0$ is a differential operator with constant coefficients and $\hat{L}_1$ is a differential operator which tends to zero as the amplitude of the stationary waves vanishes. For waves of small amplitude L_1 is small and perturbation theory can be applied. A discussion of the zeroth and the first approximation shows that in the case of degenerate states two different wave vectors $\vec{k}_1$ and $\vec{k}_2$ correspond

Card 1/3

42541

S/020/62/147/001/010/022
B104/B102

24 2120

AUTHORS: Galeyev, A. A., Orayevskiy, V. N.

TITLE: The instabilities of Alfvén waves

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 1, 1962, 71 - 73

TEXT: Though the Alfvén waves are exact solutions of the nonlinear magnetohydrodynamic equations, they are unstable against a certain type of perturbations. It is shown that these perturbations consist of Alfvén plus magnetosonic waves. Magnetohydrodynamic plasma waves are considered in a co-moving coordinate system, $\vec{v}$, $\vec{h}$, n, and p being the perturbations of the velocity, of the magnetic field, of density and pressure whose the time dependence can be represented in the form $\exp(-i\omega t)$. The Alfvén waves can be studied by a system of equations $(\hat{\mathcal{H}}_0 + \hat{\mathcal{H}}_1)\varphi = \Omega\varphi$. Here $\hat{\mathcal{H}}_0$ is a linear self-adjoint differential operator describing the oscillations of a homogeneous plasma with the eigenfunctions φ_Ω. The spatial dependence of the eigenfunctions is determined by a factor $\exp(i\vec{k}\vec{r}')$ and a real eigenvalue $\Omega^{(0)}$ satisfying the dispersion formula $\Omega^{(0)} = \Omega^{(0)}(\vec{k})$. $\hat{\mathcal{H}}_1$ is a linear

Card 1/4

The instabilities of Alfvén waves

differential operator with periodic coefficients where $\hat{K}_1 \longrightarrow 0$ with $\vec{H}$ and $\vec{V}$ tend to zero. $\vec{V}$ is the hydrodynamic velocity. The stability of waves with small amplitude can, therefore, be studied by applying the perturbation theory with $\alpha = V/u$ as the small parameter. In this case the correction $\omega^{(1)}$ to $\Omega^{(o)}$ has to be found. $\omega^{(1)}$ is non-zero only if at least two wave vectors which have different amounts and for which $\vec{k}_1 = \vec{k}_o + \vec{k}_2$ correspond to $\Omega^{(o)}$. Analogously $\omega_1^{(o)} = \omega_o + \omega_2^{(o)}$ holds in the laboratory system where ω_o is the background frequency. Hence, in first perturbation-theoretical approximation, instabilities of the Alfvén waves can occur only for deviations able to be written as the sum of two waves. Thus, for the perturbations

$$2\left(-\omega_{1.2}v_{1.2} - \frac{1}{4\pi n_0 M}\left|[\mathbf{k}_{1.2}\mathbf{h}_{1.2}]\,\mathbf{H}_0\right| + v_s^2\frac{n_{1.2}}{n_0}\mathbf{k}_{1.2}\right) = \qquad (5)$$

$$= -(\mathbf{V}\mathbf{k}_{2.1})\,\mathbf{v}_{2.1} + (\mathbf{v}_{2.1}\mathbf{k}_0)\,\mathbf{V} + \frac{1}{4\pi n_0 M}\left([[\mathbf{k}_{2.1}\mathbf{h}_{2.1}]\,\mathbf{H}] \pm \right.$$

$$\left. \pm [[\mathbf{k}_0\mathbf{H}]\,\mathbf{h}_{2.1}] \mp [[\mathbf{k}_0\mathbf{H}]\mathbf{H}_0]\frac{n_{2.1}}{n_0}\right\},$$

Card 2/4

The instabilities of Alfvén waves

$$-\omega_{1,2}h_{1,2} - [k_{1,2}[v_{1,2}H_0]] = \frac{1}{2}[k_{1,2}\{[Vh_{2,1}] + [v_{2,1}H]\}],$$

$$-\omega_{1,2}n_{1,2} + n_0(k_{1,2}v_{1,2}) + \frac{1}{2}n_{2,1}(k_{1,2}V) = 0,$$

$$v_s^2 = \gamma\frac{p_0}{Mn_0},$$

is obtained. Here $\vec{h}_{1,2}$, $\vec{v}_{1,2}$, $n_{1,2}$ are the amplitudes of waves with the frequencies $\omega_1 = \omega_1^{(0)} + \omega^{(1)}$, $\omega_2 = \omega_2^{(0)} + \omega^{(1)}$. The stability of Alfvén waves to various forms of perturbations can be studied with the aid of (5). If the perturbation consists of an Alfvén wave and a magnetosonic wave then

$$\omega^{(1)2} = \frac{k_{2y}^2V^2}{16\left[1 + \left(\frac{k_{2x}k_{2y}v_s^2}{\omega_2^2 - k_{2x}^2v_s^2}\right)^2\right]}\left|\frac{\omega_2^2\cos\delta}{\omega_2^2 - k_{2x}^2v_s^2} - 4\sin\gamma_1^*\sin(\gamma+\delta)\right|^2\frac{\omega_1}{\omega_2}. \qquad (6)$$

where δ is the angle between the planes $(\vec{k}_0, \vec{H}_0)$ and $(\vec{k}_1, \vec{H}_0)$ and γ that between $(\vec{k}_1\vec{H}_0)$ and $(\vec{k}_2\vec{H}_0)$. It follows that Alfvén waves are unstable for

The instabilities of Alfvén waves

S/020/62/147/001/010/022
B104/B102

any propagation angle with respect to the magnetic field. During the period $1/\nu$ where $\nu = V_0/(8uv_2)^{1/2}$, the Alfvén waves go over into random oscillation of the medium. This refutes the assumption that the Alfvén waves are long lived, on which certain astrophysical and geophysical hypotheses are based. There is 1 figure.

ASSOCIATION: Novosibirskiy gosudarstvennyy universitet (Novosibirsk State University)

PRESENTED: June 7, 1962, by M. A. Leontovich, Academician

SUBMITTED: May 29, 1962

Card 4/4

ZASLAVSKIY, G.M (Novosibirsk); MOISEYEV, S.S. (Novosibirsk); ORAYEVSKIY, V.N. (Novosibirsk)

Turbulent diffusion of a slightly ionized magnetized plasma. PMTF no. 6:29-33 N-D '63. (MIRA 17:7)

S/057/63/033/002/021/023
B108/B186

AUTHOR: Orayevskiy, V. N.

TITLE: The stability of steady plasma oscillations without a magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 2, 1963, 251 - 252

TEXT: In an earlier paper (ZhTF, 32, no. 11, 1291, 1962) it was shown that the longitudinal ion oscillations in a plasma without a magnetic field are stable to any one-dimensional perturbation. The electron Langmuir oscillations are not stable to perturbations that act as the sum of an ion wave and an electron Langmuir oscillation with another frequency and another phase velocity. It is shown here that these results do not change qualitatively if the perturbations are not one-dimensional but have an arbitrary form. The investigations are made for waves of not too large amplitudes.

SUBMITTED: August 6, 1962

Card 1/1

ORAYEVSKIY, V.N.

AID Nr. 980-3 31 May

UNIVERSAL INSTABILITY OF INHOMOGENEOUS PLASMA (USSR)

Galeyev, A. A., V. N. Orayevskiy, and R. Z. Sagdeyev. Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 3, Mar 1963, 903-911.
S/056/63/044/003/022/053

It is proved analytically that short-wave perturbations in a low-pressure, low-density plasma contained in a magnetic field can cause a local instability which is independent of the configuration of the containing field and is, therefore, called a universal instability. Plasma in such a state of rarefaction cannot be examined by means of the magnetohydrodynamic model; instead, it must be considered within the framework of the kinetic theory based on the Boltzmann equation. However, since the kinetic theory is difficult to use in an instability analysis, two limiting cases are considered: a) the plasma is rarefied enough for the magnetohydrodynamic treatment to be invalid, and yet the mean free path is short enough for the plasma to be regarded as two interpenetrating fluids; and b) plasma density is low enough to permit the neglect of collision effects and the use of kinetic equations without the collision integral. Since the universal instability of rarefied plasma is based on short-wave perturbations, it is expected to lead to a slow turbulent diffusion rather than to the rapid escape of macroscopic plasma bunches from magnetic confinement. [VG]

Card 1/1

L 12409-63 EWT(1)/EWG(k)/EEC(b)-2/ES(w)-2/BDS AFFTC/ASD/ESD-3/SSD
Ps-4/Pab-4/Pi-4/Po-4 AT/IJP(C)

ACCESSION NR: AP3001397 S/0020/63/150/004/0775/0778

AUTHOR: Orayevskiy, V. N.; Sagdeyev, R. Z.

TITLE: Effect of "drifting" waves on the diffusion of plasma in a magnetic field.

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 775-778

TOPIC TAGS: plasma in magnetic field, diffusion of plasma, plasma instability

ABSTRACT: Theoretical investigations by B. B. Kadomtsev and A. V. Timofeyev (Doklady AN, vol. 146, 1962, page 581), by A. A. Galeyev, V. N. Orayevskiy and Sagdeyev, R. Z. (Preprint, Inst. nuclear phys. Siberian section AN SSSR, 1962), and by L. I. Rudakov and A. Mikhailovskiy (Preprint, Inst. atomic energy, 1962) of the stability of nonuniform plasma in a strong magnetic field have shown that there are instabilities with wavelengths of the order of, or smaller than, the ionic Larmor radius in magnetic traps with a large Larmor radius. Authors investigated to what extent the oscillations due to this instability affect the magnetic retention of the plasma. Diffusion coefficients are evaluated for different conditions. Orig. art. has: 16 formulas, 2 figures.

Card 1/2

GALEEV, A. A.; ORAYEVSKIY, V. N. (Novosibirsk)

"Instability of Alfven waves of arbitrary amplitude"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 1964.

ACCESSION NR: AP4036529 S/0089/64/016/005/0441/0442

AUTHOR: Orayevskiy, V. N.

TITLE: Instability of electronic Langmuir oscillations of plasma in magnetic field

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 441-442

TOPIC TAGS: electronic plasma oscillation, Langmuir wave, plasma instability, ionic plasma oscillation, electromagnetic plasma wave, plasma wave, plasma

ABSTRACT: The author and R. Z. Sagdeyer have shown (Zh. tekhn. fiz 32 (1962)) that the electronic longitudinal oscillations in a plasma without magnetic field are unstable only relative to decomposition into ionic longitudinal and electronic Langmuir waves of a smaller frequency. The ionic oscillations receive approximately $(M/m)^{1/2}$ times less energy than the electronic oscillations (M and m are the ion and electron masses respectively), so that the instability of Langmuir waves essentially leads only to a shift of their frequency. The author shows in the present paper that there appears in plasma in a magnetic field an additional instability of Langmuir waves. Their energy is spent on production of two electromagnetic waves polarized in different directions. "The author is grateful to

ACCESSION NR: AP4036529

R. Z. Sagdeyer, A. A. Galeyn, and Ya. B. Faynberg for useful discussions." Orig. art. has: no figures and 12 equations.

ASSOCIATION: None

SUBMITTED: 28Jun63	DATE ACQ: 03Jun64	ENCL: 00
SUB CODE: , ME	NO REF SOV: 003	OTHER: 000

Card 2/2

ACCESSION NR: AP4016503 S/0020/64/154/005/1069/1071

AUTHOR: Galeyev, A. A.; Orayevskiy, V. N.

TITLE: On the instability of magneto-hydrodynamic waves of large amplitude

SOURCE: AN SSSR. Doklady*, v. 154, no. 5, 1964, 1069-1071

TOPIC TAGS: alfen wave, small amplitude, unstable magneto acoustical wave, large amplitude, mathematical computation, slow wave, fast wave

ABSTRACT: It was previously reported (A. A. Galeyeu, V. N. Orayevskiy, DAN, 147, 71 (1962)) that an alfen wave of finite, but small amplitude is unstable in a compressible medium. The reason for the instability is attributed to the presence of a positive return linking between small disturbances of alfen and magneto-acoustical type waves. It is expected that the mechanism mentioned above must also lead to instability in the case of waves of large amplitudes. However, natural mathematical difficulties do not allow a solution for an arbitrary

Card 1/2

ACCESSION NR: AP4016503

profile of the issuing alfen wave. Therefore, the stability of alfen waves with a see-saw profile of magnetic field lines is investigated. It was found that the stability problem reduces to finding the frequencies of proper oscillations of the medium in the periodic field of the issuing alfen wave. A mathematical solution is presented. It is concluded that the instability is similar to the instability of alfen waves of small amplitudes relative to a simultaneous disturbance of slow and fast magneto-acoustic waves. "The authors express their gratitude to academician ... A. Leontovich for a discussion of the results and to R. Z. Sagdeyev, whose advice and interest in this work stimulated its execution." Orig. art. has: 7 equations and 1 figure.

ASSOCIATION: Novosibirskiy gosudarstvenny*y universitet (State University of Novosibirsk)

SUBMITTED: 21Oct63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: PH, GE, MM NO REF SOV: 002 OTHER: 000

Card 2/2

ORAZALIYEV, M.

"Peculiarities of Themoregulation in Ewes Under the Conditions in Turkmeniya." Cand Biol Sci, Inst of Physiology imeni I. P. Pavlov, Acad Sci USSR (Apr-Jun 54). (Vest Ak Nauk, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

ORAZALIYEV, M.

Some details in the method of studying thermal control of organisms in hot climates. Izv.AN Turk.SSR no.2:75-76 '55. (MLRA 9:5)

1. Institut zhivotnovodstva AN Turkmenskoy SSR.
(BODY TEMPERATURE)

ORAZALIYEV, M.

Effect of high temperature and insolation on sheep raised in the Turkmen S.S.R. Izv.AN Turk.SSR no.4:58-64 '55. (MLRA 9:5)

1. Institut zhivonovodstva AN Turkmenskoy SSR.
(Turkmenistan--Sheep) (Heat--Physiological effect)

MEREDOV, T.; ORAZGEL'DYYEV, A.

Geology of the Karachop and Tumbs anticlines. Izv.AN Turk.SSR.Ser.-fiz.-tekh.,khim.i geol.nauk. no.3:70-76 '62. (MIRA 16:5)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Turkmenskoy SSR.
(Turkmenistan—Geology, Structural)

ORAZGULYAYEV, B.

Electroconductivity of silicon in pulsed magnetic fields. Izv. AN Turk. SSR.Ser. fiz.-tekh., khim. i geol. nauk no.4:115-117 '63. (MIRA 17:2)

1. Dagestanskiy filial AN SSSR.

L 38857-66 EWT(1) LJP(c)

ACC NR: AP6018584 SOURCE CODE: UR/0181/66/008/006/1972/1973

AUTHOR: Orazgulyyev, B.

ORG: Institute of Physics of the Dagestan Branch, AN SSSR, Makhachkala (Institut fiziki Dagestanskogo filiala AN SSSR)

TITLE: Dependence of the transverse Hall effect in p-silicon on the magnetic field intensity

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1972-1973

TOPIC TAGS: silicon semiconductor, Hall effect, pulsed magnetic field, electron mobility, hole mobility, semiconductor carrier

ABSTRACT: In view of the lack of published data on measurements of the Hall effect in p-Si in magnetic fields where the Hall constant reverses sign, the author measured the dependence of the Hall effect on the magnetic field intensity in samples with specific resistivity ρ = 20 and 40 ohm-cm at room temperature, in pulsed magnetic fields with intensity up to 260 kOe. The initial section of the Hall-voltage dependence on the field was measured in a constant magnetic field (up to 30 kOe). The first reversal in the sign of the Hall constant could not be observed experimentally because of the slight difference between the mobilities of the light holes in p-Si and the electrons. At temperatures of 195C and fields up to 40 kOe, the Hall constant is equal to zero. With increasing temperature (above 195C), electrons begin to predominate in the Hall effect and this leads to the second change in the sign of the

Card 1/2

ACC NR: AP6030163 SOURCE CODE: UR/0120/66/000/004/0221/0222

AUTHOR: Orazgulyyev, B.

ORG: Institute of Physics of the Dagestansk Affiliate, AN SSSR, Makhachkala (Institut fiziki Dagestanskogo filiala AN SSSR)

TITLE: The use of high frequency heating to obtain ohmic contacts on silicon

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1966, 221-222

TOPIC TAGS: silicon, fusing device, silicon semiconductor, electromagnetic wave generation

ABSTRACT: A device is described which is used to obtain ohmic contacts on silicon. It consists of a high frequency generator operating at 1 Mc and a vacuum system. Contacts on *n*- and *p*-silicon produced with this device were ohmic up to 4.2°K. The advantages of the method include ease and rapidity of varying the temperature over a wide range and diffusion over a period of 1-1.5 min. This eliminates any variation in the physical properties of the crystal which occurs when fusion is carried out in a conventional furnace. The high frequency heating method is also applicable to Ge, GaAs, GaP, and AlSd semiconductors. The author expresses his gratitude to P. I. Bashirov and to V. V. Kolomoyets for their advice. Orig. art. has: 2 figures.

SUB CODE: 11,14,09/ SUBM DATE: 28Jul65/ ORIG REF: 001

UDC: 621.382.032.27

Card 1/1

ORAZKULIYEV, I.K.; OTROSHCHENKO, O.S.; SADYKOV, A.S.

Extraction of leptocladine from the plant Hammada leptoclada.
Izv.AN Turk.SSR.Ser.fiz.-tekh.,khim.i geol.nauk. no.3:122-123
'62. (MIRA 16:5)

1. Institut khimii AN Turkmenskoy SSR i Tashkentskiy gosudarstvennyy universitet imeni V.I.Lenina.
(Alkaloids) (Goosefoot)

ORAZKULIYEV, I.K.; OTROSHCHENKO, O.S.; SADYKOV, A.S.

Extraction of alkaloids with the aid of ammonium iodide.
Zhur.ob.khim. 32 no.11:3827-3828 N '62. (MIRA 15:11)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I. Lenina.
(Alkaloids) (Ammonium iodide)

ORAZKULIYEV, I.; OTROSHCHENKO, O.S.; SADYKOV, A.S.

Alkaloids of the Hammada leptoclada plant, family Chenopodiaceae. Nauch.trudy TashGU no.263.Khim.nauki no.13:8-15 '64. (MIRA 18:8)

ORAZKULIYEV, [illegible]K.; [illegible], O.S.; SADYKOV, A.S.

Adsorption method of extraction of alkaloids from Hammada leptoclada of the Chenopodiaceae family. Zhur. prikl. khim. 37 no.6: 1394-1395 Je '64. (MIRA 18:3)

1. Tashkentskiy gosudarstvennyy universitet i Institut khimii AN Turkmenskoy SSR.

ORAZMAMEDOV, K.M.

Sanitary supervision and urgent tasks of the state sanitary inspection. Zdrav. Turk. 7 no.11:37-40 N'63 (MIRA 17:3)

1. Glavnyy gosudarstvennyy sanitarnyy inspektor, nachal'nik sanitarno-epidemiologicheskogo upravleniya Ministerstva zdravookhraneniya Turkmenskoy SSR.

ORAZMUKHAMEDOV, A.

Discovery of Bergia ammannioides Roxb. in Turkmenistan. Izv. AN Turk.SSR no.4:61-62 '59. (MIRA 13:8)

1. Institut botaniki AN Turkmenskoy SSR.
(Turkmenistan--Waterwort)

CHOPANOV, P.; ORAZMUKHOMMEDOV, A.

Newly discovered habitats of the wild colocynth Citrullus colocynthis (L.)Schrad. in Turkmenistan. Izv.AN Turk.SSR no.6: 108-110 '59. (MIRA 13:5)

1. Institut botaniki AN Turkmenskoy SSR.
(Turkmenistan--Watermelon)

ORAZMUKHOMMEDOV, A., CAND BIO SCI, [redacted] FLORA AND VEGETATION OF THE LOWER TEDZHEN DELTA. ASHKHABAD, 1960. (TURKMEN AGR INST IM M. I. KALININ). (KL, 2-61, 205).

ORAZMUKHAMMEDOV, A.

Use of various sources of moisture by dominant plant species in the lower Tedzhen Delta. Izv. AN Turk.SSR.Ser.biol.nauk no.1:7[illegible] 75 '65. (MIRA 18:5)

1. Institut botaniki AN Turkmenskoy SSR.

ORAZNYYAZOV, Y.; GURBANOV, T., red.

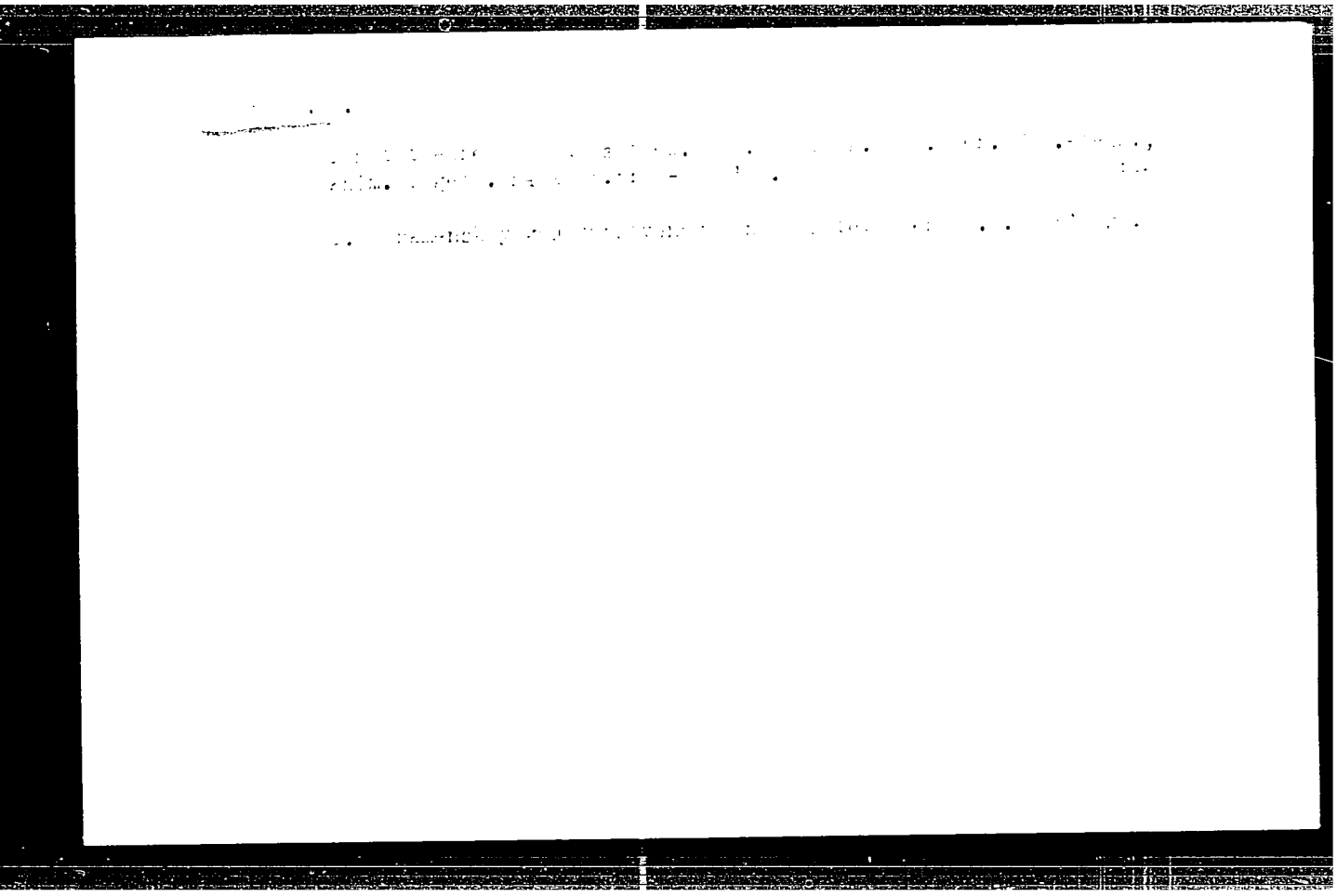
[Toward new achievements] Teze ustunliklere tarap; Ashgabadyn TSSR-in XX iyllygy adynaaky mashyn gurlushyk zavodynyn guluzhy tsekhinin ish tezhribesi barada. Ashgabat, Turkmenistan dovlet neshiriaty, 1961. 22 p. [In Turkmen] (MIRA 15:1)
(Technological innovations)

ORAZOV, A.

"[illegible]
[illegible]"

report [illegible]
Moscow, [illegible]

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012381



ORAZOV, G.

A local theorem for a random number of random terms. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.1:3-8 '65. (MIRA 18:7)

1. Turkmenskiy gosudarstvennyy universitet imeni Gor'kogo.

L 28903-66 EWT(d)/T IJP(c)

ACC NR: AP6019171 SOURCE CODE: UR/0166/66/000/001/0030/0039

AUTHOR: Sirazhdinov, S. Kh.; Orazov, G. 18 B

ORG: Institute of Mathematics im. V. I. Romanovskiy, AN UzSSR (Institut matematiki AN UzSSR)

TITLE: Refinement of a theorem of H. Robbins

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1966, 30-39

TOPIC TAGS: distribution function, asymptotic behavior

ABSTRACT: Let $\xi_1, \xi_2, \ldots, \xi_n$ be a sequence of independent, equally distributed random variables with distribution function $F(x) = P(\xi_1 < x)$; ν a random variable, taking the values 1, 2, 3, ..., which is not dependent on ξ_j; and let the distribution function of quantity ν be regarded as dependent on parameter λ, so that the distribution function

$$\zeta_\nu = \xi_1 + \xi_2 + \cdots + \xi_\nu \qquad (1)$$

will depend on parameter λ. Let the following designations be introduced:

Card 1/5

L 28903-66
ACC NR: AP6019171

$$p_k = P(\nu = k),\ a = M\nu = \sum_1^\infty p_k k,\ \beta = M\nu^2 = \sum_1^\infty p_k k^2$$

$$\gamma^2 = D\nu = \sum_1^\infty p_k (k-a)^2 = \beta - a^2,\ \theta(t) = Me^{t(\nu-a)/\gamma} =$$

$$= \sum_1^\infty p_k e^{t(k-a)/\gamma}$$

$$a = M\xi_j = \int_{-\infty}^{\infty} x\,dF(x),\quad b = M\xi_j^2 = \int_{-\infty}^{\infty} x^2\,dF(x),$$

$$c = M\xi_j^3 = \int_{-\infty}^{\infty} x^3\,dF(x)$$

$$\sigma^2 D\xi_j = \int_{-\infty}^{\infty} (x-a)^2\,dF(x)\quad (0 < \sigma^2 < \infty),$$

$$f(t) = Me^{t\xi_j} = \int_{-\infty}^{\infty} e^{tx}\,dF(x)$$

Card 2/5

Then for random variable (1) it is possible to write

$$M\zeta_\tau = a\tau, \quad D\zeta_\tau = \sigma^2\tau + a^2\gamma^2\tau = s^2\tau. \qquad (2)$$

The authors deal with the normalized random variable

$$\eta_\tau = \frac{\zeta_\tau - M\zeta_\tau}{\sqrt{D\zeta_\tau}} = \frac{\xi_1 + \xi_2 + \cdots + \xi_\tau - a\tau}{s\sqrt{\tau}}$$

with the characteristic function

$$\psi(t) = Me^{it\eta_\tau} = \sum_1^\infty p_k e^{-ita\sqrt{k}/s} f^k(t/s\sqrt{k}).$$

The following conditions are introduced

for $\lambda \to \infty$

$$\sigma^2 \to \infty, \quad \gamma^2 = o(\sigma^2), \qquad (A)$$

$$\gamma^2 = O(a). \qquad (B)$$

On the basis of (2), if (A) and (B) are observed, then $\alpha \to \infty$. H. Robbins showed that (A) always occurs if, say, the random variable $(\gamma - \alpha)/\sigma$ possesses a limiting distribution function $G(x)$ such that $G(x) > 0$ for any bounded x (for $\lambda \to \infty$). Robbins was investigating the asymptotic behavior of characteristic function (3) and proved, given condition (A), the validity of the correlation

$$\psi(t) = \theta(\delta t)\, e^{-\frac{1}{2}t^2(1-\delta^2)} + o(1),$$

when $\lambda \to \infty$. Here

$$\delta = \frac{\sigma\tau}{\delta} = \left(\frac{a^2\tau^2}{a^2\tau^2 + \sigma^2}\right)^{1/2}.$$

The present article considers the closeness of these characteristic functions which make it possible, given certain supplementary conditions, to evaluate the closeness of the corresponding distribution functions.
The authors outline the proof of the following theorem: If conditions (A) and (B) are satisfied and ξ_j have finite third moments, then, given

$$|t| < T_\lambda = C_\lambda\, a^{1/4}$$

L 28903-66

ACC NR: AP6019171

the following relation is valid:

$$\int_{|t|<T_\lambda} \left| [\varphi(t) - \theta(bt) e^{-\lambda |t| + i\gamma t}] / t \right| dt = O\left(a^{-\frac{1}{3}} \ln a\right).$$

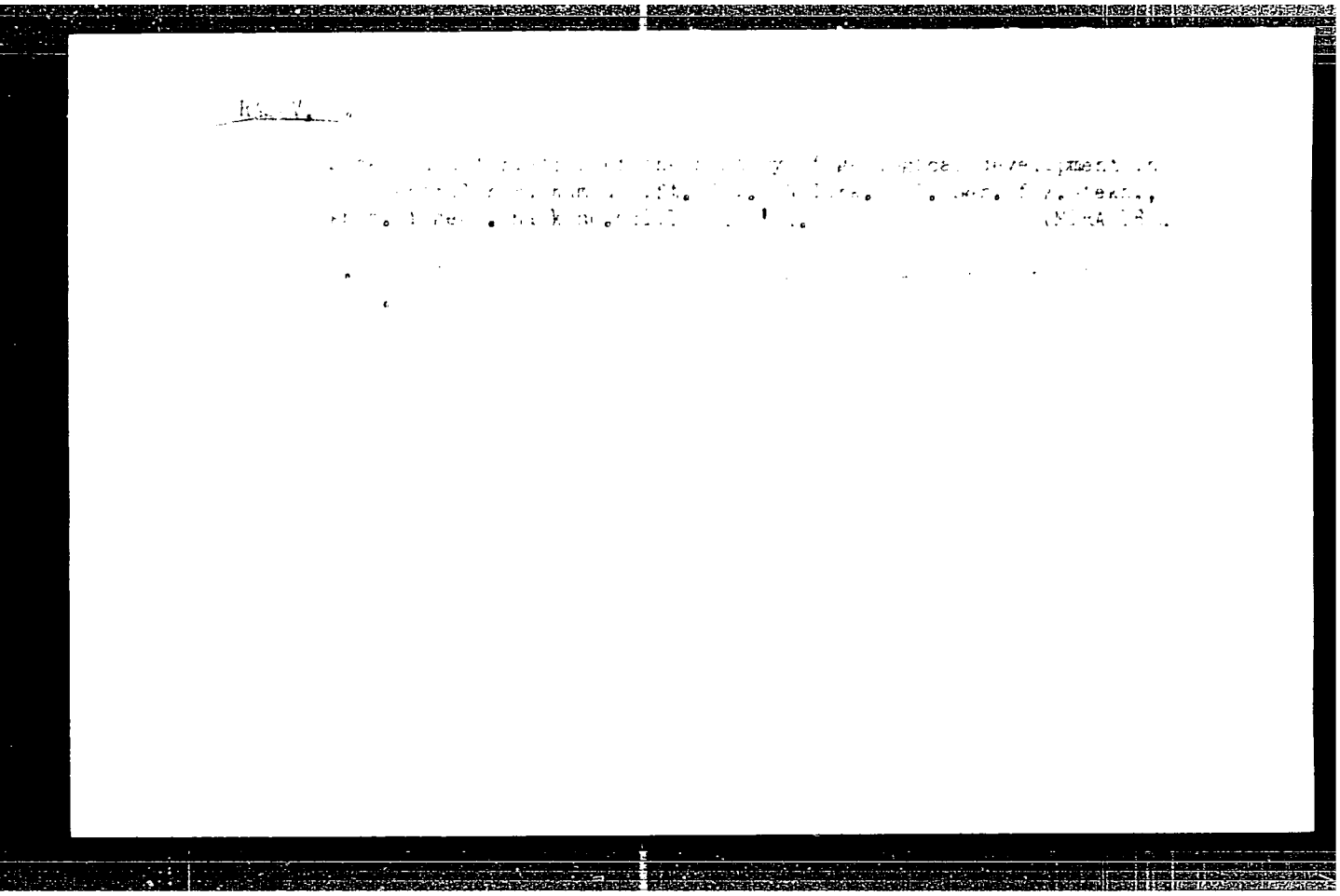
Several corollaries of the theorem are considered. Orig. art. has: 26 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 13Jun65 / ORIG REF: 003 / OTH REF: 001

Card 5/5

OKAZOV, K.; SEYITGELDIYEV, A., red.

[Power of mechanization. Mekanizatsiiamyn guizhi. Ashgabat, Turkmendovletneshir, 1963. 28 p. [In Turkmen] (MIRA 17:6)



14(5) SOV/92-58-8-20/36

AUTHORS: Geletiy, G. and Orazov, T., Engineers

TITLE: Mechanisms for Closing Valves of a Petroleum Sampling Thief (Mekhanizmy zakryvayushchiye klapany probootbornika nefti)

PERIODICAL: Neftyanik, 1958, Nr 8, pp 22-24 (USSR)

ABSTRACT: The authors state that valves of a thief taking petroleum samples in a deep well are usually closed by a watch mechanism. However, under a pressure ranging from 200 atm, and temperature from 90° C to 120°C, it is almost impossible to take petroleum samples at a considerable depth by using a thief provided with a watch mechanism for closing its valves. Therefore, the authors developed two different types of a similar mechanism for closing the valves of a thief. The use of the first or the second type depends on the construction of lifting pipes. The first type is shown in Fig. 1, and the second in Fig. 2. The authors explain how the mechanism of the first and the second type works, and

Card 1/2

specifies its different parts and their designation. Both types of the mechanism can be easily built by the oilfield force. They are wound up in the same manner as a watch and do not require any change in the process of petroleum sampling operation which is being successfully carried out in the western Turkmen region with sampling thiefs equipped with the newly devised mechanism. As the time record shows, the time needed to complete the petroleum sampling operation with the aid of the new mechanism has been reduced and the cost of operation lowered. There are 2 figures.

ASSOCIATION: Stanislavskiy sovnarkhoz (The Sovnarkhoz of the Stanislav Province)

ORAZOV, Ya.

Effect of the density of plants on the growth and development of hybrid corn in southern Turkmenistan. Izv. AN Turk. SSR. Ser. biol. nauk no.4:72-76 '63. (MIRA 16:9)

1. Iolotanskaya selektsionnaya stantsiya.
(Turkmenistan--Hybrid corn)
(Plants, Space arrangement of)

PAVLOV, N.V., akademik; AGEYEVA, N.T.; BAYTENOV, M.B.; GOLOSKOKOV, V.P., kand.biolog.nauk, red.; KORNILOVA, V.S.; POLYAKOV, P.P., Prinimali uchastiye: VASIL'YEVA, A.N.; ORAZOVA, A.; PISYUK, V.V., BYKOV, B.A., red.; KUBANSKAYA, Z.V., kand.biolog.nauk, red.; SUVOROVA, R.I., red.; ALFEROVA, P.F., tekhn.red.

[Flora of Kazakhstan] Flora Kazakhstana. Glav.red.N.V.Pavlov. Sost.N.T.Ageeva i dr. Alma-Ata. Vol.3. 1960. 457 p.
(MIRA 13:5)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut botaniki. 2. AN KazSSR (for Pavlov). 3. Chlen-korrespondent AN KazSSR (for Bykov).

(Kazakhstan--Dicotyledons)

BAYTENOV, M.S.; VASIL'YEVA, A.N.; GAMAYUNOVA, A.P.; GOLOSKOKOV, V.P.; ORAZOVA, A.; ROLDUGIN, I.I.; SEMIOTROCHEVA, N.L.; FISYUN, V.V.; TEREKHOVA, V.I.; PAVLOV, N.V., akademik, glav. red.; BYKOV, B.A., red.; GOLOSKOKOV, V.P., kand. biolog. nauk, red.; KUBANSKAYA, Z.V., kand. biolog. nauk, red.; SUVOROVA, R.I., red.; ALFEROVA, P.F., tekhn. red.

[Flora of Kazakhstan] Flora Kazakhstana. Glav. red. N.V.Pavlov i dr. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR. Vol.5. 1961. 512 p. (MIRA 14:10)

1. AN Kazakhskoy SSR (for Pavlov). 2. Chlen-korrespondent AN Kazakhskoy SSR (for Bykov).
(Kazakhstan—Leguminosae)

VASIL'YEVA, A.N.; GAMAYUNOVA, A.P.; GOLOSKOKOV, V.P., kand. biol. nauk; OKAZOVA, A.; ROLDUGIN, I.I.; SEMIOTROCHEVA, N.L.; FISYUN, V.V.; MENZHULINA, N.A., red. ; ALFEROVA, P.F., tekhn. red.

[Illustrated guide to plants of the family Leguminosae of Kazakhstan] Illiustrirovannyi opredelitel' rastenii semeistva bobovykh Kazakhstana. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1962. 357 p. (MIRA 15:6)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut botaniki.
(Kazakhstan—Leguminosae)

VASIL'YEVA, A.N.; GAMAYUNOVA, A.I.; GOLOSKOKOV, V.I., kand. biol. nauk; DMITRIYEVA, A.A.; KARYSHEVA, N.K.; KUBANSKAYA, Z.V., kand. biol. nauk; LAZOVA, T.; PAVLOV, N.V., akademik; ROLDUGIN, I.I.; SEMIOTROVKHEV, N.L.; TEREKHOVA, V.I.; FIRSOV, V.V.; TSAGOLOVA, V.A.; SHVETSOVA, K.I., red.; IVANOVA, E.I., red.; BYKOV, B.A., red.

[Flora of Kazakhstan] Flora Kazakhstana. Glav. red. N.V. Pavlov. Gost. N.I. Vasil'yeva i dr. Alma-Ata, Izd-vo AN Kazakh. SSR. V 1.7. 1964. 494 p. (MIRA 17:6)

1. Akademiya nauk Kaz.SSR (for Pavlov). 2. Chlen-korrespondent AN KazSSR (for Bykov).

L 18946-65 EWT(m)/EPF(c)/T Pr-4 DJ

ACCESSION NR: AP4049440 S/0318/64/000/007/0006/0008

AUTHOR: Rudakova, N. Ya.; Polishchuk, S. A.; Gomolina, L. N.; Orazova, M. R.; Sereda, Z. Ya.

TITLE: Conditions of production of stable transformer oil from Anastas'yevsk petroleum

SOURCE: Neftepererabotka i neftekhimiya, no. 7, 1964, 6-8

TOPIC TAGS: transformer oil, petroleum refining, Anastas'yevsk petroleum, aromatic hydrocarbon content, tar content, transformer oil stability

ABSTRACT: The transformer distillate of Anastas'yevsk petroleum processed by the L'vov Petroleum Refinery is characterized by a high content of heavy aromatic hydrocarbons and tars. The authors studied the dependence of the stability of the transformer oil on its content of aromatic compounds. Comparative data tabulated in the article show that the most stable transformer oil contains the lowest amount of tars and heavy hydrocarbons, and the lowest amount of aromatic hydrocarbons having refractive indices higher than 1.53. The authors conclude that the inadequate stability of the oils produced by the L'vov Refinery is due to their insufficient refining. In order to determine the influence of fractional composition on the formation of water-soluble acids at the beginning of aging of the oil, the distil-

Card 1/2

L 18946-65
ACCESSION NR: AP4049440

late was collected in fractions 10C apart, from which samples of transformer oil were obtained by refining. As the boiling range of the fractions rose, the stability of the transformer oil decreased. The transformer distillate should be collected up to 370C. The authors found that the best fraction for producing transformer oil from Anastas'yevsk petroleum processed by the L'vov Refinery is the one boiling between 270 and 370C. Orig. art. has: 3 tables.

ASSOCIATION: L'vovskiy filial, UkrNIIgiproneft' (L'vov Branch of UkrNIIgiproneft')

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 001 OTHER: 000

Card 2/2

VASIL'YEVA, A.N. GAMAYUNOVA, A.P. DMITRIYEVA, A.A ; GOLOSKOV, V.P.,kand. biol. nauk; ZAYTSEVA, L.G.; KAIMYSHEVA, N.Kh. ORAZOVA, A.; PAVLOV, N.V., akademik; ROLDUGIN, I.I.; SEMICTROCHEVA, N.L.; TEREKHOVA, V.I., FISYUN, V.V.; TSAGALOVA, V.G.; SUVOROVA, R.I., red.

[Flora of Kazakhstan] Flora Kazakhstana. Glav. red. N.V. Pavlov. Alma-Ata, Nauka. Vol.8. 1965. 444 p. (MIRA 18:6)

1. Akademiya nauk Kaz.SSR (for Pavlov).

S/710/62/000/008/003/003
E075/E436

AUTHORS: Rudakova, N.Ya., Polishchuk, O.A., Candidates of Technical Sciences, Gamolina, L.N., Orazova, M.R., Engineers

TITLE: Crude naphthenic acids - effective emulsion breakers for hydrophobic petroleum emulsions

SOURCE: Kiyev. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, neftyanoy i gazovoy promyshlennosti. Nauchnyye zapiski. no.8. 1962. Neftepererabotka. 71-80

TEXT: The emulsion breakers in current use in the USSR are reviewed and it is concluded that to be effective they must contain salts of surface active oil-soluble sulphonic acids and the minimum content of non-active ballast. Separation of water from a light Glinsk Rozbyshev crude and heavy Kokhanovo crude was investigated to elucidate the action of various emulsion breakers. These include neutralized kerosene and gas oil sulphonic acids, crude and neutralized naphthenic acids produced in different refineries. The most effective were the oil-soluble crude naphthenic acids isolated from alkali wastes after

Card 1/2

S/0202/63/000/006/0010/0014

ACCESSION NR: AP4014860

AUTHORS: Annayev, R. G.; Myalikguly*yev, G.; Orazsakhatov, A.

TITLE: Dependence of longitudinal and transverse magnetostriction of Ni_3Pd alloy on thermal treatment

SOURCE: AN TurkmSSR. Izv. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no. 6, 1963, 10-14

TOPIC TAGS: magnetostriction, annealing temperature, strain gauge, transverse magnetostriction, superstructure, parity effect, magnetic saturation

ABSTRACT: The longitudinal and transverse magnetostriction of Ni_3Pd has been studied as a function of annealing temperatures. The magnetostriction is measured by means of a wire strain gauge. Both magnetostrictions decrease by increasing the annealing temperature up to 410C and increase after a further raise in the annealing temperature. The nature of the change on the effect of longitudinal and transverse magnetostriction saturation as a function of annealing temperatures indicates the presence of superstructures in the alloy and places the order-disorder transition in the 410-420C temperature range. The results also verify the parity effect law

Card 1/2

ACCESSION NR: AP4014860

which states: the longitudinal parity effect at magnetic saturation is twice the transverse effect with a negative sign. Orig. art. has: 3 formulas, 3 figures, and 1 table.

ASSOCIATION: Turkmenskiy gosudarstvenny*y universitet im. A. M. Gor'kogo (Turkmen State University)

SUBMITTED: 29Jan63 DATE ACQ: 19Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 013 OTHER: 000

Card 2/2

ANNAYEV, R.G.; ORAZSAKHATOV, A.

Linear magnetostriction in certain mixed ferrites. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.1:9-13 '65. (MIRA 18:7)

1. Turkmenskiy gosudarstvennyy universitet imeni Gor'kogo.

L 44312-65 EED-2/EPR/EWT(l)/EWT(m)/EWT(b)/EWP(t) Ps-4 IJP(c) JD

ACCESSION NR: AP5011794 UR/0202/65/000/002/0008/0013

AUTHOR: Annayev, R. G.; Orazsakhatov, A.

TITLE: Magnetostriction of magnesium-manganese ferrites in the Curie temperature region

SOURCE: AN TurkmSSR. Izvestiya. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no. 2, 1965, 8-13

TOPIC TAGS: magnetostriction, magnetization, ferrite, magnesium ferrite, manganese ferrite, temperature dependence, Curie point

ABSTRACT: The temperature dependence of the magnetostriction and magnetization of magnesium-manganese ferrites was investigated in the interval from room temperature to the Curie point. Samples were rod-shaped, 8-13 cm long, 6 mm in diameter, and their composition

temperature in the interval from 20°C to the Curie point. The Curie

Card 1/2

L 44312-65

ACCESSION NR: AP5011794

point for magnesium-manganese ferrites rises linearly with an increase in the magnesium ferrite content. For all investigated ferrites, near the Curie point there is a linear dependence of H/I on the square of the magnetization. Orig. art. has: 4 formulas, 4 figures, and 1 table.

ASSOCIATION: Turkmenskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Turkmen State University)

SUBMITTED: 16Jun65 ENCL: 00 SUB CODE: EC, EM

NR REF SOV: 012 OTHER: 000

Card 2/2

ANNAYEV, B.G., ORAZSAKHATOV, A.

Temperature dependence of the magnetosaturation of magnesium-copper and nickel-copper ferrites. Izv. AN Turk. SSR. Ser. fiz.-tekh. khim. i geol. nauk no. 3 11-15 '65.

1. Turkmenskiy gosudarstvennyy universitet imeni [illegible].
Submitted June 29, 1964.

ACC NR: AT6028984 SOURCE CODE: UR/0000/66/000/000/0155/0159

AUTHOR: Annayev, R. G.; Orazsakhatov, A.

ORG: none

TITLE: Analysis of linear magnetostriction in some composite ferrites

SOURCE: Vsesoyuznoye soveshchaniye po ferritam. 4th, Minsk. Fizicheskiye i fiziko-khimicheskiye svoystva ferritov (Physical and physicochemical properties of ferrites); doklady soveshchaniya. Minsk, Nauka i tekhnika, 1966, 155-159

TOPIC TAGS: ferrite, magnetostriction, electric resistivity, magnetic field, saturation condition, metal physics

ABSTRACT: A study was made of longitudinal ($\lambda_{\parallel}$) and transverse magnetostriction ($\lambda_{\perp}$) of polycrystalline nickel-magnesium, nickel-copper, and cobalt-zinc ferrites. Room temperature magnetostriction was measured on a Wheatstone bridge by measuring $\Delta R/R$ to an accuracy of 10^{-6} ohm, since $\lambda = \Delta l/l = 1/n\ \Delta R/R$. Values of $\lambda_{\parallel}$ and $\lambda_{\perp}$ are given as functions of the outer magnetic field which ranged from 0 to $5.5 \cdot 10^{-3}$ oersted. For all ferrites, $\lambda_{\parallel}$ was negative while $\lambda_{\perp}$ was positive. Both $\lambda_{\parallel}$ and $\lambda_{\perp}$ reached a saturation value at $1\text{-}2 \cdot 10^{-3}$ oersted depending on the ferrite composition. Saturation val-

Card 1/2

ACC NR: AT6028984

ues of $\lambda_{\parallel}$ and $\lambda_{\perp}$ increased linearly in absolute magnitude as functions of wt % of NiO in nickel-magnesium ferrites. Up to 24.8% NiO, good agreement was obtained with a formula previously developed for nickel-magnesium ferrites having low NiO contents:

$$\lambda_{S.AB}^{(T)} = \lambda_{S.AO}^{(0°)}\left(1 - \frac{T}{\theta_{AB} - \beta B}\right) + aB,$$

where $\lambda_{S,AB}^{(T)}$ is the magnetostrictive saturation of a two component alloy *A-B* at a given temperature *T*, $\lambda_{S,AO}^{(0°)}$ is the magnetostrictive saturation for ferromagnetic component *A* at 0°K, B is the composition of the second component, α and β are constants, and θ_{AB} is the Curie point of the alloy *A-B*. Saturation values of $\lambda_{\parallel}/\lambda_{\perp}$ ranged from 1.993 to 2.280 for all ferrites tested. These values were compared to the saturation values predicted by the law of Akulov:

$$\lambda_{\parallel} = -2\lambda_{\perp}.$$

Orig. art. has: 3 figures, 2 tables, 3 formulas.

SUB CODE: 11,20/ SUBM DATE: 22Dec65/ ORIG REF: 007

Card 2/2

ORAZ'MBETOV, Nurgazy Orazymbetovich; MELESHKO, K.L., red.; ZLOBIN, M.V., tekhn.red.

[Earthquakes and the behavior of surface structures] Zemletriasenila i povedenie nadzemnykh sooruzhenii. Alma-Ata, Kazakhskoe gos. izd-vo, 1958. 149 p. (MIRA 12:2)
(Earthquakes and building)

ORAZYMBETOV, Nurgazy Orazymbetovich, inzh.; MAKHONIN, Vladimir Vasil'yevich, inzh.; MUKMANOV, Nasyr Lukmanovich, inzh.; TAKEZHANOV, F.Kh., inzh., red.; IL'YASHENKO, L.V., red.; BAIMBETOV, M., red.; TURABAYEV, B., tekhn.red.

[Handbook on local building materials and their use] Spravochnik po mestnym stroitel'nym materialam i ikh primenenie. Pod red. F.Kh. Takezhanova. Alma-Ata, Kazakhskoe gos.izd-vo, 1959. 510 p. (MIRA 13:4)

(Building materials)

ORAZYMBETOV, N.O.; SERDYUKOV, M.M.; SHANIN, S.A.; DUZINKEVICH, S.Yu., inzh., nauchnyy red.; VILKOV, G.N., red.izd-va; MEDVEDEV, L.Ya., tekhn.red.; OSENKO, L.M., tekhn.red.

[The Ashkhabad earthquake of 1948; engineering analysis of after-effects of the earthquake] Ashkhabadskoe zemletriasenie 1948 g.; inzhenernyi analiz posledstvii zemletriasseniia. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 306 p. (MIRA 13:6)

(Turkmenistan--Earthquakes and building)

BANSHCHIKOV, V.M., prof.; [illegible]; RYCHIKOV, G.V.; [illegible]

Dynamics and [illegible]

[illegible]

ORBACHEV.KAYA, [illegible]; [illegible]YAYEVA, N. [illegible]; [illegible], G.V.

[illegible] of ge[illegible] [illegible] disorders. [illegible] [illegible]

(MIRA [illegible])

1. Kafedra [illegible] [illegible] Lenina meditsinskogo instituta imeni [illegible] (zav. [illegible] prof. V.M.Banshchik[illegible]).

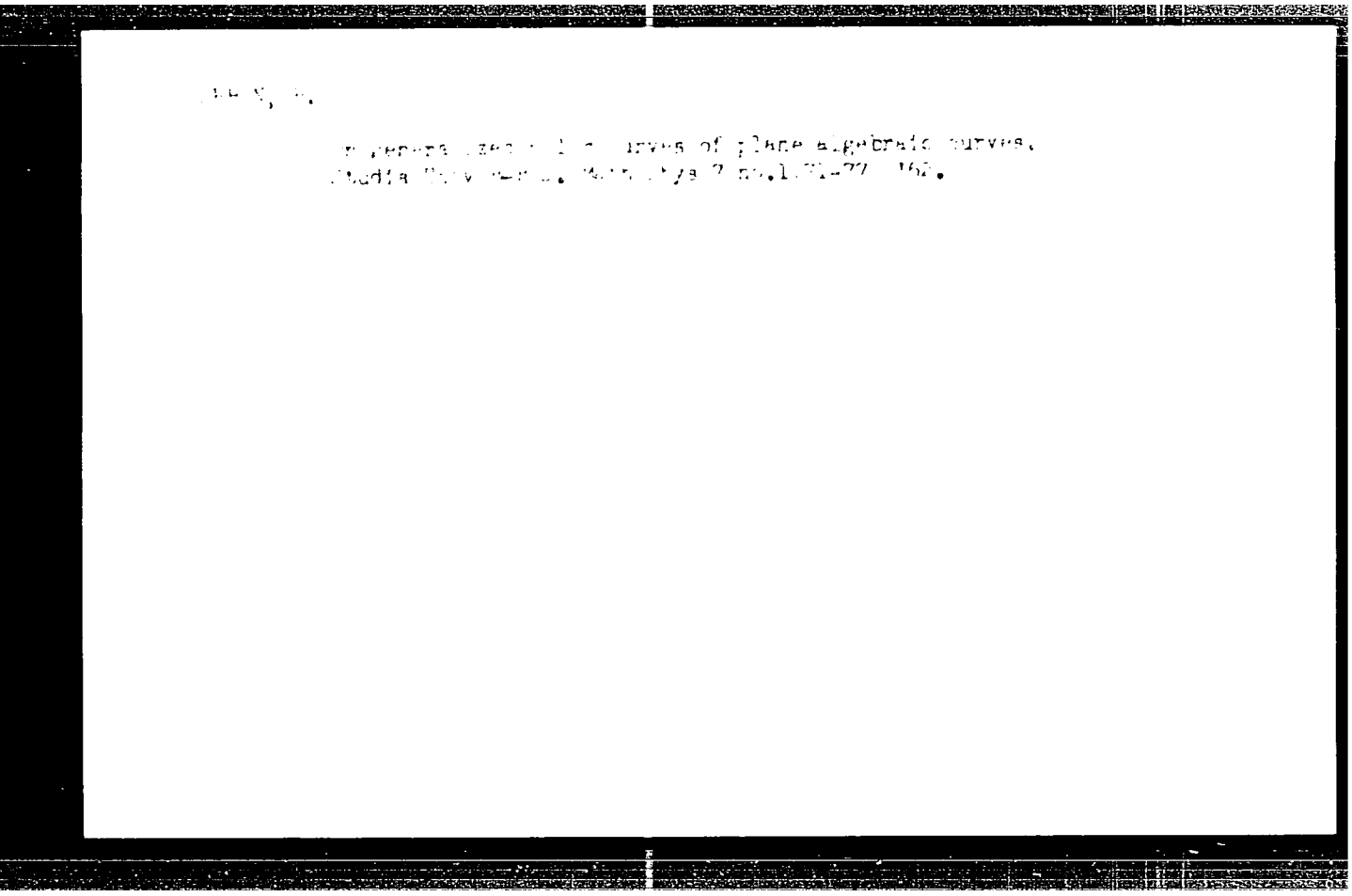
ORBAN, Aladar

Description of the N14 automatic leveling instrument Geod kart; 17 no.1:59-60 '65.

ORBAN, b.

Simple determination of detail points in topographic surveying. p. 154. GEODEZIA ES KARTOGRAFIA. (Allami Foldmeresi es Terkepeszeti Hivatal) Budapest. Vol. 8, No. 2, 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress. Vol. 5, no. 11, November 1956.



ORBAN, B.

Applications [illegible] generalized p[illegible] [illegible]ves. Studia [illegible]
Math-Phys [illegible]

ORBAN, D'yerd' [Orbán, D.] (Budapesht); SHOMOD'I, Emil [Somogyi, E.] (Budapesht); DONAT, Tibor [Dónat, T.] (Budapesht)

Examination of cyclical changes in the vaginal secretion by means of fluorescent microscopy. Akush. i gin. 33 no.5:111-112 S-O '57. (MIRA 12:5)

(OVULATION
cyclical change exam. by luminescent microscopy of vaginal secretion)
(VAGINA, physiol.
determ. of ovulation cycle by luminescent microscopy of vaginal secretion)

ORBAN, Erno; KORMENDY, Melinda

Calorimetric examination of the fluid absorption capacity of Aerosil. Acta pharm. Hung. 36 no.1:20-26 J '66/

1. Submitted September 3, 1965.

ORBAN, Ferenc,; SZIGETI, Gyorgy

Analysis of the production conditions of the ammonium containing Paris blue. Veszprem vegyip egy kozl 4 no.4:377-378 '60.

1. Timfoldgyar, Almasfuzito, es Veszpremi Vegyipari Egyetem Kemiai Technologia Tanszek.

MATYASI, Jozsef; ORBAN, Ferenone

Effect of the organic compound content of aluminate alkalies on the Bayer alumina production process.II. Koh lap 95 no.8:343-347 Ag '62.

JUHASZ, Adam, fomernok; ORBAN, Ferencne, kutatomernok; MATULA, Miklos, fizikus

Analysis of the chemical composition and structure of sodium aluminum silicates as well as reducing the caustic soda loss in the Bayer process. Koh lap 98 no.2:66-73 F '65.

1. Aluminum Industry Designing Institute (for Juhasz).
2. Almasfuzito Alumina Factory, Almasfuzito (for Matula).

L 47241-66 EWP(t)/ETI IJP(c) JH/JD

ACC NR: AI6034297 SOURCE CODE: HU/0014/66/000/006/0276/0280

JUHASZ, Adam, Metallurgical Engineer, Orban, Ferencne Research Engineer, and MATULA, Miklos, Physicist,

ORG: none

"Investigation of the Chemical Composition and Structure of Sodium Aluminum Silicates and Reduction of the Caustic-Soda Losses in the Bayer Process"

Budapest, Kohaszati Lapok, Vol 99, No 6, Jun 1966, pp 276-280.

Abstract: This article is a continuation of a previous paper for which, however, no bibliographic reference has been cited. The formation mechanism of sodium aluminum silicate has been discussed on the basis of purely chemical analyses and the behavior of the sodium aluminum silicate in aluminate solutions has been investigated with the aim of utilizing the data obtained for reducing the losses of the alumina-manufacturing process according to the Bayer technique. The SiO_2 is thought to be present in a complex form; the solubility of the crystalline sodium aluminum silicate is in an inverse relation to the strength increase of the crystal lattice. Orig. art. has: 1 figure, 13 formulas and 1 table. [JPRS: 37,242]

TOPIC TAGS: aluminum silicate, silicon dioxide, sodium hydroxide

SUB CODE: 07 / SUBM DATE: none / SOV REF: 010

Card 1/1

UDC: 546.28:541.8:[illegible]

PROCESSES AND PROPERTIES INDEX

Bc A-4

Concentration of heavy water within the human organism. G. Ondás (Orvosi Hetilap, 1935, 79, 1[illegible]—[illegible]6).—No appreciable amount of D_2O was detected in H_2O from brain and liver of old men or from flesh of old oxen. The osmotic function of the kidneys probably prevents accumulation of D_2O.

Ch. Abs. (p)

METALLURGICAL LITERATURE CLASSIFICATION

ORBAN, G.

Therapy of habitual abortion. Magy. noorv. lap. 15 no. 12:375-380 Dec 1952. (CLML 24:1)

1. Doctor. 2. National Institute of the Examination and Counseling in Sterility (Head -- Dr. Gyorgy Orban).

ASZTALOS, Gyula, dr.; HORN, Bela, dr.; ORBAN, Gyorgy, dr.

Result in the treatment of 200 cases of habitual abortion. Magy. noorv.lap. 17 no.6:336-340 Nov 54.

1. Budapesti Orvostudomanyegyetem I. sz. noi klinikajanak (Igazgato: Horn Bela dr. egyet. tanar) es az Orszages Meddosegvizsgalo Intezet (Vezeto foorvos: Orban Gyorgy dr.) Kozlemenye.

(ABORTION,
habitual, ther.)

TARJAN, R.,; KRAMER, M.,; ORBAN, G.

Comparative studies on vitamin E content in blood serum in normal pregnancy, Orv. hetil. 96 no.47:1300-1302 20 Nov 55.

1. Az Orszagos Elelmezes- es Taplalkozastudomanyi Intezet (igazgato: Tarjan Robert dr. az orvostudomanyok kandidatusa) es az Orszagos Meddosegvizsgalo es Tanacsado Intezetenek (vezeto foorvos: Orban Gyorgy dr.) kozlemenye.

(VITAMIN E in blood,
in pregn. & in habitual abortion)
(BLOOD,
vitamin E, in normal pregn. & habitual abortion)
(PREGNANCY, blood in,
vitamin E)
(ABORTION
habitual, blood vitamin E in)

REZSO, Gimes; ORBAN, Gyorgy

Colpocytological examinations in pregnancy. Magy. noorv. lap. 20 no.6: 356-363 Dec 57.

1. Budapesti Orvostudomanyi Egyetem I. sz. noi klinikajanak (igazgato: Horn Bela) es az Orszagos Meddonegvizsgalo Intezet (foorvos: Orban Gyorgy) kozlemenye.
(PREGNANCY, physiol.
cytol. exam. of vaginal smears (Hun))
(VAGINAL SMEARS, in pregn.
cytol. exam. (Hun))

ORBAN, Gyorgy, dr.

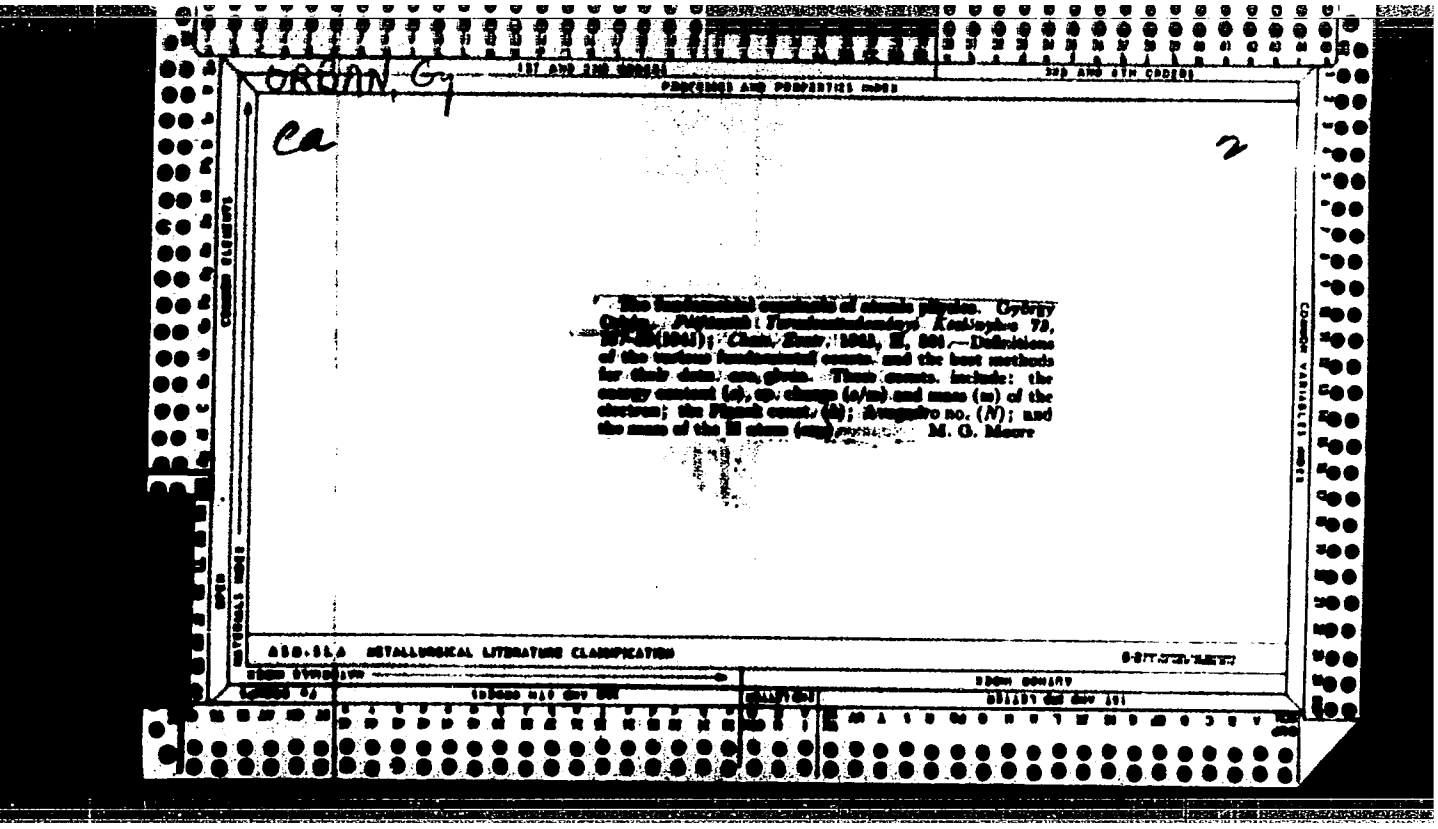
On psychoprophylactic preparation for painless labor. Magy. noorv.lap. 23 no.6:329-340 N '60.

1. Fovarosi Balassa Janos Korhaz (igazgato: Dimitrov Szokodi Daniel dr.) Szuleszet-Nogyogyaszati Osztalyanak (foorvos: Orban Gyorgy dr.) kozlemenye.
(LABOR)

SZANTO, Endre, dr.; ORBAN, Gyorgy, dr.

4 pregnancies at term after pneumonectomy. Orv. hetil. 104 no.9: 416-418 3 Mr '63.

1. Orszagos Koranyi Tbc. Intezet es Fovarosi Balassa Janos Korhaz.
(PNEUMONECTOMY) (TUBERCULOSIS, PULMONARY)



ORBAN, Gyorgy, dr.

The significance of the space dosage and body position in roentgen irradiation. Magy. radiol. 6 no.2:88-93 Apr. 54.

1. A z Orszagos Sugarfizikai Laboratorium kozlemenye (Vezeto: Orban Gyorgy, dr.) a fizikai tudomanyok kandidatusa)
(RADIOTHERAPY
body position in radiother. of perineal region)

ORBAN [illegible]

HUNGARY/Nuclear Physics - General G-1

Abs Jour : Ref Zhur - Fizika, No 7, 1958, No 14098

Author : Orban Gyorgy
Inst : Not Given
Title : Conference on Isotopes in Moscow 9-12 April 1957.

Orig Pub : Magyar tud., 1957, 64, No 5-6, 244-247

Abstract : No abstract

Card : 1/1

EXCERPTA MEDICA Sec 18 Vol. 1/12 Cardiovas. Dis Dec 57

ORBAN GY

3329. HAJDU I. and ORBÁN Gy. Készülék angiokardiographiához *Apparatus for angiocardiography* Mag. Radiol. 1956, 8/3 (180—182) Illus. 7

The seriograph described here consists of a rotatory plate holding 5 cassettes 24 × 30 cm. in size. It may be mounted on any Bucky-table and allows 5 subsequent exposures within 12 or 20 sec. The practical value of the apparatus is illustrated by serial films of a case of coarctation of the aorta. Györgyi - Budapest (XVIII, 14*)

PAZAKAS, S.; KERTESZ, L.; ORBAN, Gy.; PETRANYI, Gy.

Study on the iodine metabolism of the thyroid gland with ionization chamber. Acta med. hung. 11 no.4:405-415 1958.

1. II. innere klinik der medizinischen universitat, debrecen und atomkernforschungs-institut der ungarischen akademie der Wissenschaften, debrecen.

(IODINE, radioactive
diag. of thyroid dis., measurement of radioiodine untake by Orban's ionization chamber (Ger))
(THYROID GLAND, dis.
diag. by measurement of radioiodine uptake with Orban's ionization chamber (Ger))
(RADIATION COUNTERS
Orban's ionization chamber (Ger))

ORMAI, Gyorgy

Progress in roentgen physics. ATOMKI kozl 4 no.3/4:143-[illegible]

ORBAN, Gyorgy, dr.; PATKO, Jozsef; BERTA, Istvan, dr.

The x-ray photochemical method for gradual dosimetry. Magy. radiol. 14 no.3:162-168 Je '62.

1. A Debreceni Kossuth Lajos Tudomany gyetem Alkalmazott Fizikai Intezetenek (igazgato: Orban Gyorgy dr. egyetemi tanar) es a Debreceni Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati klinikajanak (igazgato: Arvay Sandor dr. egyetemi tanar) kozlemenye.

(RADIOMETRY)

KELENYI,G.; FRANKL,J.; ORBAN,I.

Clinical aspects and pathogenesis of prophyria cutanea tarda.
Orv. hetil. 101 no.24:829-834 12 Je '60.

1. Pecsi Orvostudomanyi Egyetem, Korbonsctani Intezet es Kapesvari Megyei Korbaz, Borgyegyeszati Osztaly.
(PORPHYRIA)

FORGACS, Istvan; ORBAN, Imre

Experiences with the clinical use of palfium (R. 875). Orv. hetil. 100 no.3:124-125 18 Jan 59.

1. A Budapest Orvostudomanyi Egyetem III. sz. Sebeszeti Klinikajanak (igazgato: Rubanyi Pal dr. egyet. tanar) kozlemenye.

(ANALGESICS AND ANTIPYRETICS, ther. use
(2,2-diphenyl-3-methyl-4-morpholino)-butyryl pyrrolidine, clin. trial (Hun))

FORGACS, Istvan, dr.; VOSZKA, Rudolf, dr.; ORBAN, Imre, dr.

Explosions occurring in operating rooms. Orv.hetil. 100 no.52:1869-1872 D '59.

1. A Budapesti Orvostudomanyi Egyetem III. sz. Sebeszeti Klinikajanak (Igazgato: Rubanyi Pal dr. egyetemi tanar) es Orvosi Fizikai Intezetenek (Igazgato: Tarjan Imre dr. egyetemi tanar) kozlemenye.
(EXPLOSIONS)
(OPERATING ROOMS)