

KOVALYNEH, A. I.; SMAGA, F.M.; PAVLOVA, Ye. Ye.; and YEGOROV, I.F.

"The C. F. T. and I. C. T. in Diagnosing Toxoplasmosis"

Voprosy toksoplazmoza, report theses of a conference on toxoplasmosis,  
Moscow, 3-5 April 1961, publ. by Inst Epidemiology and Microbiology  
im. N. F. Gamaleya, Acad. Med. Sci USSR, Moscow, 1961, 69pp.

YEGOROV, I.F.; KOVALYUKH, A.I.; SMAGA, M.F.; PAVLOVA, Ye.Ye.

Comparative indices of the complement fixation reaction and intracutaneous test in the diagnosis of toxoplasmosis. Zhur. mikrobiol. epid. i immun. 33 no.10:51-54 0'62 (MIRA 17:4)

1. Iz L'vovskoy oblastnoy psikhonevrologicheskoy bol'nitsy.

40286

S/081/62/000/014/001/039  
B166/B144

18.9500

AUTHOR: Kovalyunayte, V.

TITLE: Mechanism of single crystal growth in a solution irradiated by ultrasonic waves

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1962, 31, abstract 14B202 (Sb. "Primeneniye ul'traakust. k issled. veshchestva" no. 12. M., 1961, 171-175)

TEXT: Detailed study is established that the influence of ultrasonics on the rate of growth ( $v$ ) of a single crystal increases with reduction in the degree of supersaturation of the mother liquor; the effect of ultrasonic vibrations on the shape of the crystal increases with increase in the degree of supersaturation of the mother liquor. The quantity  $v$  increases with increase in the intensity of the ultrasonic vibrations up to  $0.1 \text{ w/cm}^2$ . The effect of ultrasonics on single crystal growth is assumed to be explained by the action of acoustic wind and the elastic vibrations of the crystal itself. [Abstracter's note: Complete translation.]

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КОВАЛЮНАУТЕ, У. 4ε.  
24(2)

PHASE I BOOK EXPLOITATION

SOV/2353

Akademiya nauk SSSR. Institut kristallografi

Rost kristallov, tom. 2 (Growth of Crystals, Vol. 2) Moscow, 1959. 238 p.  
Errata slip inserted. 2,000 copies printed.

Resp. Eds.: A. V. Shubnikov, Academician, and N. N. Sheftal', Doctor of  
Geological and Mineralogical Sciences; Ed. of Publishing House:  
K. S. Aleksandrov; Tech. Ed.: T. V. Polyakova.

PURPOSE: This book is intended for scientists and researchers engaged in  
crystallography and in growing industrial monocrystals.

COVERAGE: This is the second of two volumes on crystal growth. The first  
volume contained reports delivered at the First Congress on Crystal Growth.  
The present volume also contains an extensive study of corundum synthesis  
by S. K. Popov [deceased]. These studies reflect the development of Soviet  
research in crystallography in the period following the first congress.  
The studies contain some essentially new results obtained by Soviet scientists.  
The editors express the hope that these studies will unite the efforts of Sov-  
iet scientists engaged in studying the process of crystal growth and in grow-

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Growth of Crystals (Cont.)

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ing industrially valuable monocrystals. No personalities are mentioned.  
References are given at the end of each article.

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Slavnova, Ye. N. Main Trends in the Study of Mixed Systems: Inorganic Crystals - Organic Admixture (Survey) 223

AVAILABLE: Library of Congress

Card 5/5

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9-9-59



S.1150

S/070/62/007/004/009/016  
E132/E435

AUTHORS: Kapustin, A.P., Kovalyunaite, V.Ye.  
TITLE: The generation and development of centres of crystallization in solutions of potassium aluminium alums in ultrasonic fields.

PERIODICAL: Kristallografiya, v.7, no.4, 1962, 613-615

TEXT: A series of experiments on the precipitation of supersaturated aqueous solutions of potassium aluminium alum by ultra sonic waves have been made. It is shown that precipitation takes place whether there is a seed or not. In the latter case it is important whether the seed is put at a node or antinode of the standing wave system. If the seed is at a pressure, antinode precipitation is seven times faster than if there is no seed. A frequency of 30 kc/s was used with an (acoustic) power of 0.42 W/cm<sup>2</sup>. Control experiments with simple stirrings were performed. There are 4 tables.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography AS USSR)

SUBMITTED: September 22, 1961

Card 1/1

SEE S/070/62/007/004/016/016

KAPUSTIN, A.P.; KOVALYUNAYTE, V.Ye.

Growth of potassium alum crystals in an ultrasonic field.  
Kristallografiia 6 no.5:805-807 S-O '61. (MIRA 14:10)

1. Institut kristallografi AN SSSR.  
(Alum crystals--Growth) (Ultrasonic waves)

BULOCHNIKOV, D. I.; KOVALYUS, V. A.; YURMANOV, B. N.

Portable hygrometer. Priborostroenie no.10:29 0 '62.  
(MIRA 15:10)

(Hygrometry—Equipment and supplies)

KOVALYUSHKO, S.P.; BELYAKOV, M.I., red.; TOGOBITSKAYA, N.V.  
[Tobobits'ka, N.V.], red.; KOVALENKO, O.I., red.;  
DOBROVOL'SKIY, O.A. [Dobrovol's'kyi, O.A.], red.;  
NAGORNIY, A.G. [Nahorny, A.H.], red.; LEVITSKAYA, G.P.  
[Levyts'ka, H.P.], red.; CHEREVATSKIY, S.A. [Cherevats'kyi,  
S.A.], tekhn. red.

[Manual on production planning and organization on collective  
and state farms] Dovidnyk po planuvanniu i organizatsii vy-  
robnytstva v kolhospakh i radhospakh. Kyiv, Derzhsil'hosp-  
vydav URSS, 1963. 935 p. (MIRA 16:12)

(Ukraine--Farm management--Handbooks, manuals, etc.)

KOVALYUSHKO, S.P.; KIREYEV, F.M. [Kirieiev, F.M.], red.; LUPKO, A.Ya.,  
~~red.~~ SEMENKO, M.V., red.

[Economic manual on collective farm planning] Ekonomichnyi  
dovidnyk po planuvanniu v kolhospakh. Kyiv, Derzh.vyd-vo  
sil's'kohospodars'koi lit-ry URSR, 1959. 447 p. (MIRA 12:12)  
(Collective farms)

USPENSKIY, Gleb; KOVAL'ZON, F.P., redaktor; KLYUCHKINA, Ya.S., tekhnicheskii redaktor.

[From Orenburg to Ufa; extracted from "Notes from the road."  
Ot Orenburga do Ufy; iz "Pisem s dorogi." [Chkalov] Chkalovskoe  
knizhnoe izd-vo, 1955. 60 p. (MLRA 8:11)  
(Ural Mountain region--Description and travel)

SEMKOV, Angel, prepodavatel'; CHOKOYEV, Zhivko, prepodavatel';  
OSTAPENKO, N.N., red.; PASTUKHOV, V.M., red.; KOVAL'ZON, F.P.,  
red.; DORODNOVA, L.A., tekhn.red.

[Training workers in machining metals in industrial schools]  
Podgotovka rabochikh po metalloobrabotke v promyshlennykh uchi-  
lishchakh. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat,  
1960. 44 p. (MIRA 13:11)

1. Promyshlennoye uchilishche po metalloobrabotke goroda Ruse  
Bolgarskoy Narodnoy Respubliki (for Semkov, Chokoyev).  
(Machine shop practice--Study and teaching)

PARKHOMENKO, Vladimir Mikhaylovich; SHAFARENKO, Mark Samoylovich; OSIPOV, M.I., red.; KOVAL'ZON, F.P., red.; NESMYSLOVA, L.M., tekhn.red.

[Training of cabinetmakers and operators of woodworking machines]  
Podgotovka stoliarov-krasnoderevtsev i stanochnikov po derevo-  
obrabotke. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat,  
1960. 61 p. (MIRA 13:9)

1. Starshiy master proizvodstvennogo obucheniya (for Parkhomenko).
2. Zamestitel' direktora po uchebno-proizvodstvennoy rabote  
tekhnicheskogo uchilishcha No.6 g.Kiyeva (for Shafarenko).  
(Woodwork--Study and teaching)



YUDASIN, Lev Samoylovich; YEVGEN'YEV, B.S., red.; KOVAL'ZON, F.P., red.;  
DORODNOVA, L.A., tekhn.red.

[Story about an invention] Rasskaz ob odnom izobretenii. Moskva,  
Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 69 p.  
(MIRA 14:4)

(Loginov, Ivan Grigor'evich, 1924- ) (Tractors)

SHILYAKOV, Nikolay Ivanovich; KOZ'MIN, N.V., red.; KOVAL'ZON, F.P.,  
red.; DORODNOVA, L.A., tekhn.red.

[Laboratory work and excursions for the course "General  
technology of metals"] Laboratorno-prakticheskie raboty i  
ekskursii po kursu "Obshchaya tekhnologiya metallov."  
Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960.  
70 p. (MIRA 13:11)

1. Zamestitel' direktora tekhnicheskogo uchilishcha No.9  
g.Vladimira (for Shilyakov).  
(Metals)

VASNETSOV, Valeriy Mikhaylovich; KOVAL'ZON, F.P., red.; PEREDERIY, S.P.,  
tekhn. red.

[Work training of students at independent construction sites] Pro-  
izvodstvennoe obuchenie uchashchikhsia na stroitel'stve samo-  
stoyatel'nykh ob'ektov. Moskva, Vses. uchebno-pedagog. izd-vo Proftekh-  
izdat, 1961. 42 p. (MIRA 14:10)

1. Direktor stroitel'nogo uchilishcha no.2 Permskoy oblasti (for  
Vasnetsov).

(Building trades--Study and teaching)

SOLOV'YEV, Viktor Andreyevich, tokar-rastochnik; BASTOV, Viktor  
Fedorovich, inzh.; KOVAL'ZON, F.P., red.; BARANOVA, N.N.,  
tekhn. red.

[Manufacture and introduction of multipurpose attachments for  
machining compound parts] Izgotovlenie i vnedrenie universal'-  
nykh prispособlenii dlia obrabotki slozhnykh detalei. Moskva,  
Proftekhizdat, 1961. 47 p. (MIRA 15:6)  
(Machine tools--Attachments)

TITOV, Petr Nikolayevich; IVANCHUKOV, A.F., red.; KOVAL'ZON, F.P.,  
red.; NESMYSLOVA, L.M., tekhn. red.

[Increasing the qualifications of workers in integrated  
crews] Povyshenie kvalifikatsii rabochikh kompleksnykh  
brigad. Moskva, Proftekhizdat, 1962. 76 o.

(MIRA 16:6)

1. Direktor uchebnogo kombinata Ufimskogo stroitel'no-  
montazhnogo tresta No.3 (for Titov).

(Construction workers)

BREGADZE, Georgiy Iosifovich; KOVAL'ZON, F.P., red.; PEREDERIY, S.P.,  
tekhn. red.; NESMYSLOVA, L.M., tekhn. red.

[On-the-job technical training of employees] Organizatsiia  
tekhnicheskogo obucheniia kadrov na proizvodstve. Moskva,  
Proftekhizdat, 1963. 72 p. (MIRA 16:8)  
(Employees, Training of)

MUKHIN, Petr Alekseyevich; KOVAL'ZON, F.P., red.; NESMYSLOVA,  
L.M., tekhn. red.

[Use of motion pictures and slides in electrical engineering lessons] Ispol'zovanie kinofil'mov i diafil'mov na urokakh elektrotehniki. Moskva, Vysshaya shkola, 1964. 31 p.  
(MIRA 17:4)

SELIVANOVA, Nadezhda Mikhaïlovna; RUZAVIN, Ivan Ivanovich;  
MOROSHENKO, L.I., nauchn. red.; KOVAL'CHENKO, F.P., red.

[Inorganic chemistry] Neorganicheskaja khimija. Moskva, Vysshaja shkola, 1965. 259 p. (MIRA 18:12)



VAYAKAS, Khel'mut Yanovich[Vajakas, Helmut]; KOVAL'ZON, F.P., red.;  
TOKER, A.M., tekhn. red.

[Equipment of a study room for preparing tractor operators and  
farm electricians] Oborudovanie uchebnykh kabinetov dlia pod-  
gotovki traktoristov i sel'skikh elektrikov. Moskva, Vses.  
uchebno-pedagog.izd-vo Proftekhizdat, 1961. 43 p.

(MIRA 15:2)

1. Zamestitel' direktora po uchebno-proizvodstvennoy rabote  
yarva-yaniskogo uchilishcha mekhanizatsii sel'skogo kho-  
zyaystva No.6, Estonskaya SSR (for Vayakas).

(Agricultural engineering--Study and teaching)

KOVAL'ZON, M.Ya., dotsent, kandidat filosofskikh nauk.

Science leads us forward and religion backwards. Nauka i zhizn' 23  
no.11:42-46 N '56. (MLRA 9:11)

(Religion and science)

KOVAN, J. A.

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5/05/60/039/003/0043  
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AUTHORS: Kobayashi, A. T., Blinov, P. I., Solov'ev, V. P., Zhuravlin  
A. V., Davletov, B. P., Zaslavskiy, G. K., Gorkh, B. A.,  
Dobry, K. M., Zaitseva, L. G., Sidorov, V. V.,  
Rusakov, V. D., Solov'ev, V. G., Sidorov, A. K.,  
Frank-Kamenetskiy, D. I., Gurevich, V. A., Solov'ev, S. V.

TITLE: Magnetosonic Resonance in the Plasma

SYNOPSIS: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, vol. 39, no. 3 (9), pp. 336-344

NOTE: The authors wanted to study the penetration of oscillations into the plasma taking place transversally to a static magnetic field. From the physical point of view, this process has a course similar to acoustic oscillations, with the difference that the magnetic pressure  $H^2/8\pi$ , and not the gas pressure, is effective here. (1) is written down as a resonance condition:  $\omega_0/\Omega \approx 1 - \epsilon$ , where  $\Omega$  is a characteristic number characterizing the type of oscillations,  $\Omega_0$  the strength of the

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(3)

static magnetic field,  $\rho$  the density of the plasma,  $\omega$  the cyclotron frequency, and  $R$  the radius of the plasma cylinder. The following is written down for the radial amplitude of the plasma motion velocity:

$$v_r \approx \frac{H_0 \sqrt{2\pi}}{4\pi R} (R - \text{strength of the magnetic alternating field, } \epsilon = \frac{v_{ph} - v_{ph0}}{v_{ph0}} \text{ phase velocity of the magnetic field). The interaction of an$$

electromagnetic high-frequency field  $H$  with a cold plasma was experimentally investigated in a cylinder in the presence of an axial

quasi-static magnetic field  $H_0$ . Fig. 1 shows the scheme of the apparatus used for the experiments. In one such experimental series the alternating field had a frequency of 12.5 Mc/sec, while in another series the

frequency was 50 Mc/sec. The plasma glow was recorded by means of an  $\Phi 37-19$  (ZM-19) photomultiplier and an OK-11M (OK-17M) oscilloscope, while the penetration of high-frequency oscillations into the plasma and the radial amplitude distribution of the magnetic alternating field were studied with the aid of a magnetic probe. The experiments were conducted with hydrogen, helium, argon, and air at an initial pressure of

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$10^{-4} - 6 \cdot 10^{-3}$  torr. The oscillations of Fig. 2, 3 show that resonance phenomena appear in the range between 300 cycles and 3 kilocycles. Fig. 4 shows the effect of resonance on the spectral lines of hydrogen. There is a dependence of the amplitude  $H_r$  of the magnetic resonance field on the amplitude of the H-field. Fig. 5 shows the spatial distribution of the amplitude  $H_r$  of the resonance field in hydrogen and argon. As may be seen from Fig. 6, the resonance shows a line structure. This effect is being further investigated. At the same time, the resonance was calculated from the Doppler shift of the spectral lines (Fig. 7, 8) corresponding to a Doppler shift of the H-field (Fig. 7, 8). The authors observed with frequencies below the hybrid frequency. The authors assume that the appearing oscillations propagated along the hybrid perpendicularity to  $H_0$ . This was confirmed by measurement of the axial component of the magnetic field  $H_z$  (Fig. 9). The authors thank L. V. Kurchatov, Academician, for interest displayed in the work. There are 9 figures and 4 references: 2 Soviet, 1 US, and 1 German.

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AKHMATOV, A.P.; BLINOV, P.I.; BOLOVIN, V.F.; BORODIN, A.V.; GAVRIN, P.P.;  
ZAVOYSKIY, Ye.K.; KOVAN, I.A.; OGANOV, M.N.; PATRUSHEV, B.I.;  
PISKAREV, Ye.V.; RUSANOV, V.D.; SMOLKIN, G.Ye.; STRIGANOV, A.B.;  
FRANK-KAMENETSKIY, D.A.; CHEREMNYKH, P.A.; CHIKIN, R.V.

Magnetoacoustic resonance in a plasma. Zhur. eksp. i teor. fiz.  
39 no.3:536-544 S '60. (MIRA 13:10)

(Nuclear magnetic resonance)  
(Plasma (Ionized gases))

88419

S/056/60/039/006/003/063  
B006/B056

26.2311

AUTHORS:

Rusanov, V. D., Patrushev, B. I., Kovan, I. A., Garkusha, V. L.,  
Frank-Kamenetskiy, D. A.

TITLE:

Investigation of the Magneto-acoustic Resonance in a Plasma  
by Means of Two Electrical Probes

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 39, No. 6 (12), pp. 1497 - 1502

TEXT: This is a report on concentration measurements made on a cylindrical hydrogen plasma, which was located in a homogeneous quasistatic longitudinal magnetic field  $H_0$ , and a high-frequency magnetic field in the same direction. Two molybdenum wire probes were used to estimate the charged particle concentration; probing was done also with the 3-cm pulses of a klystron-generator. The experimental arrangement is shown in Fig. 1, the probe circuit diagram in Fig. 3. Fig. 5 is shown as an example of the oscillograms obtained (Figs. 4-9): the upper oscillograms show the probe currents of various pairs of probes, the lower ones show the signals of

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Investigation of the Magnetó-acoustic Resonance in a Plasma by Means of Two Electrical Probes

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B006/B056

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the sound shf generator; I - probes on the walls, II - in the chamber axis. (U<sub>probe</sub> = 300 v, E = 6kv, H<sub>0</sub> = 5.8 koe, p = 8.10<sup>-4</sup> mm Hg). The probe current has two maxima, viz. at H<sub>0</sub> = 650 oe (n = 6.10<sup>12</sup> cm<sup>-3</sup>) and H<sub>0</sub> = 1580 oe (n = 5.10<sup>12</sup> cm<sup>-3</sup>) (n - electron concentration). With a change of the quasistatic magnetic field, the amplitude of the alternating field was found to have two or three resonance maxima, interpreted as magneto-acoustic resonance. The resonance frequencies are near the geometrical mean from electronic and ionic cyclotron frequency (ω<sub>e</sub>, ω<sub>i</sub>). Numerically one obtains:

$\omega^* = H_0 u_i \sqrt{4\pi} R$	1st maximum	2nd maximum
	6.0.10 <sup>7</sup>	3.1.10 <sup>8</sup>
$\omega = \omega_i \omega_e \left[ 1 + \frac{1}{\omega_i} \frac{\omega_e}{k_r^2} \right] \left[ \omega_i^* + 1 + \frac{\omega_e^2}{\omega_0^2} \right]$	7.3.10 <sup>7</sup>	4.10 <sup>8</sup>
	2.5.10 <sup>7</sup>	6.5.10 <sup>8</sup>

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Investigation of the Magneto-acoustic  
Resonance in a Plasma by Means of Two  
Electrical Probes

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(The generator frequency was  $3.2 \cdot 10^8$ ).  $\omega^*$  is the circular frequency of the radial magneto-acoustic oscillations,  $\omega$  - the circular frequency of the longitudinal-radial magnetoacoustic oscillations; the other quantities are defined in Ref. 5. Summing up: Under magneto-acoustic resonance, ionization increases rapidly and considerably. The radial concentration distribution in the plasma is nearly uniform. The authors thank Ye. K. Zavoytskiy for his interest. There are 10 figures and 5 references: 4 Soviet and 1 US.

SUBMITTED: April 23, 1960

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B006/B056

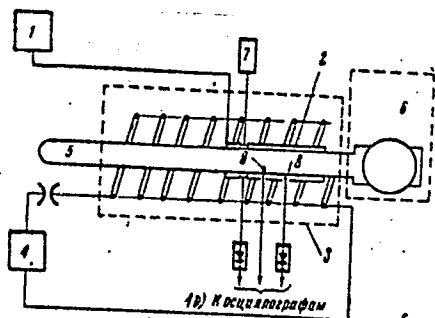


Fig. 1

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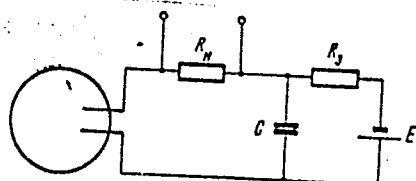


Рис. 3. Схема включения зондов

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B006/B056

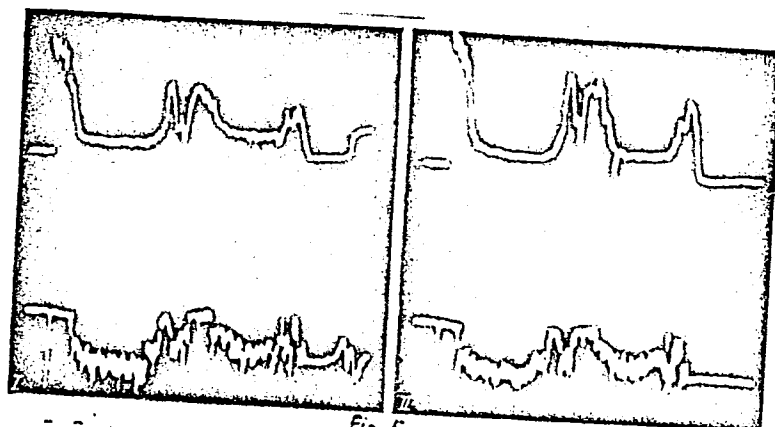


Fig. 5

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B006/B056

Text to Fig. 1: 1) Generator (150 kw, 42 - 50 Mc), 2) Oscillation circuit.  
3) Solenoid for producing the magnetic longitudinal field ( $H_{\max} = 16 \text{ koe}$ ).  
4) Capacitor battery for feeding the solenoid. 5) Cylindrical glass  
vacuum chamber. 6) Evacuation system. 7) Sounding shf generator ( $\lambda = 3 \text{ cm}$ ).  
8) Magnetic probe. 9) Double electric probes. 10) to the oscilloscope.

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9.9845

26.2321

AUTHORS:

Patrushev, B. I., Rusanov, V. D., Kovan, I. A., Savichev, V.Y.,  
Frank-Kamenetskiy, D. A.

88420

S/056/60/039/006/004/063  
B006/B056

TITLE:

Gyrotropic Properties of a Plasma During the Propagation of  
an Extraordinary Wave

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 39, No. 6 (12), pp. 1503 - 1507

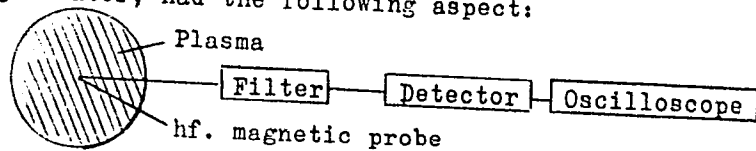
TEXT: This is a report on investigations of the propagation of electro-  
magnetic waves in a cylindrical plasma column, which is located in a  
homogeneous quasistatic magnetic field  $H_0$ . The hydrogen plasma ( $8 \cdot 10^{-4}$  mm Hg)  
was generated by means of an ionization generator (50 Mc/sec, 150 kw) in  
a glass cylinder. The high-frequency magnetic field coincided with the  
static field as to direction. A detailed description of the experimental  
arrangement is given in Ref. 1. The plane-polarized waves were produced  
by a sounding generator with 29 Mc/sec and 500 w, whose operation was not  
disturbed by discharges. The block diagram for investigating the signal  
from the magnetic probe, located in the anodic circuit of the sounding  
Card 1/4

88420

Gyrotropic Properties of a Plasma During the Propagation of an Extraordinary Wave

S/056/60/039/006/004/063  
B006/B056

generator, had the following aspect:



✓

The results obtained from these experiments are shown in a number of oscillograms and are numerically given in a Table. It could be proven that in the propagation of a wave whose frequency is between the ion- and electron cyclotron frequencies, both the wave vector and the polarization vector rotate in the plasma waveguide. This result is of interest for the retaining and hf-heating of plasma. The authors thank Ye. K. Zavoyskiy for his interest and L. I. Rudakov for discussions. There are 10 figures, 1 table, and 6 Soviet references.

SUBMITTED: April 23, 1960

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88420

S/056/50/039/006/004/063  
B006/B056

$l$	$H_{\infty} O_0$	$n$	$\sigma_1$	$\lambda_{pL}$ $t_M$	$\omega_1$	$\omega_2$
1	450	$6 \cdot 10^{12}$	13300	8,6	$7,8 \cdot 10^9$	$4,3 \cdot 10^9$
2	1370	$8 \cdot 10^{12}$	4400	13	$24 \cdot 10^9$	$13,3 \cdot 10^9$
3	2280	$5 \cdot 10^{12}$	2200	19	$39 \cdot 10^9$	$22 \cdot 10^9$

X

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B006/B056

Text to the Table:  $i$  denotes the amplification of the passing signal,  
 $n$  - the plasma density,  $\epsilon_{||}$  the longitudinal component of the dielectric  
constant,  $\lambda_{p1}$  the wavelength in the plasma,  $\omega_e$  the electron- and  $\omega_i$  the  
ion cyclotron frequency. The frequency of the sounding generator was  
 $\omega = 18.10^7$ .

X

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26.2311

22770  
31057/61/031/005/001/020  
3104/3205

AUTHORS: Zavoyskiy, Ye. K., Kovan, I. A., Patrushev, B. I.,  
Rusanov, V. D., and Frank-Kamenetskiy, D. A.

TITLE: Magnetosonic method of plasma ionization

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 513-517

TEXT: The conventional methods of producing concentrated plasma are discussed in the introduction. It is noted that the application of these methods to a magnetic field is limited. The thermal method can only be used for atoms of low ionization potentials. Ionization by longitudinal current causes instabilities, and ionization by an oscillating electron beam meets with experimental and technical difficulties. The concentration of plasma attainable by h-f discharge is limited by the plasma frequency, and the production of concentrated plasma by a longitudinal alternating field requires the use of millimeter and sub-millimeter waves. The authors tested several methods of obtaining concentrated plasma, which are not limited by the plasma frequency. This is achieved by an alternating electric field, the electric vector of which is perpendicular to a

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22770

S/057/61/031/005/001/020  
B104/B205

Magnetosonic method...

static magnetic field. This method makes it possible to use electron and ion-cyclotron or magnetosonic resonances. The latter method is not limited as to the attainable plasma concentration. It makes use of magnetosonic oscillations of a limited plasma volume, and from the theory of these oscillations it follows that the velocity amplitude of the azimuthal electron drift is given by  $v_e = \omega V / \omega_i$  (1), where  $V$  denotes the velocity amplitude of the radial plasma motion. For the kinetic electron energy one has

$$E = \frac{mv_e^2}{2} = \frac{1}{2} \frac{\omega^2}{\omega_i \omega_e} \frac{H^2}{4\pi n_e} \quad (3)$$

where  $H_0$  indicates the strength of the static magnetic field,  $H$  the amplitude of the alternating magnetic field, and  $\omega$  its frequency;  $\omega_e$  and  $\omega_i$  are the electron and ion cyclotron frequencies, respectively, and  $n_e$  denotes the electron concentrations. Ionization by radial magnetic sound is possible if its energy is higher than the ionization energy. It is obvious that the required amplitude of the alternating field is the higher, the higher are the concentration and strength of the static field. With a

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Magnetosonic method...

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given amplitude of the h-f field  $\tilde{H}$  and a given plasma concentration, there exists a threshold  $H^*$  of the static field strength above which ionization will not be possible any longer. By increasing the amplitude of the h-f field, the strength of the static field and the attainable plasma concentration can be extended infinitely. In a strong static field, however, a very strong alternating field is required for obtaining high concentrations by radial magnetic sound. Ionization by magnetic sound has been observed experimentally in a quasi-static field in several installations. Effective ionization occurred both below and above the hybrid frequency, resulting in concentrations of more than  $10^{13} \text{ cm}^{-3}$ . The ionization had the nature of resonance and was always accompanied by the penetration of an alternating field into the plasma. Fig. 1 shows resonance ionization by a h-f magnetic field with an increase of the quasi-static magnetic field in time. By blanking a 3-cm probe signal it was possible to indicate a concentration higher than  $10^{12} \text{ cm}^{-3}$ . The penetration of an external h-f field was observed by means of a magnetic probe introduced into the discharge space. In fields larger than  $H^*$ , concentration dropped considerably. It could be shown that in experiments

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27280

S/056/61/041/002/001/028  
B102/B205

26.2321

AUTHORS:

Borodin, A. V., Gavrin, P. P., Kovan, I. A., Patrushev, B. I.,  
Nedoseyev, S. L., Rusanov, V. D., Frank-Kamenetskiy, D. A.

TITLE:

Magnetoacoustic oscillations and the instability of an  
induction pinch

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,  
no. 2(8), 1961, 317 - 321

X

TEXT: The results of experiments on a plasma pinch are presented. The experimental arrangement used is schematically shown in Fig.1. A vacuum chamber ( $10^{-7}$  mm Hg, 450 - 500°C) made of quartz served as discharge space. Most experiments were performed in air ( $10^{-1}$  -  $10^{-2}$  mm Hg), and some of them in hydrogen, argon, xenon, and helium ( $10^{-1}$  -  $10^{-3}$  mm Hg). The magnetic field was generated by a homogeneous turn with an inductance of 30 cm, and a 200-kw h-f generator was used for pre-ionization. The

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27180

Magnetoacoustic oscillations and...

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B102/B205

behaviour of the discharge was studied with the aid of a quick-acting photorecorder, type COP-2M(SFR - 2M), and a magnetic probe. The directions of photographing are indicated in Fig.1. Pictures taken in the axial direction show that the incandescence of the gas in the first semiperiod appears in the form of an annular tube. This indicates that the radial oscillations originate from the cold plasma contained in the incandescing tube. Pictures were taken in intervals of  $0.3 \mu\text{sec}$ . The first pinch is attributed to the formation of a relatively weak shock wave. In air with a pressure of  $8 \cdot 10^{-2}$  mm Hg, the shock wave has a velocity of  $2.3 \cdot 10^6$  cm/sec and a front width of  $\sim 0.7$  cm. The discontinuity of the magnetic field at the axis is explained by collisions of strong shock waves. The radial oscillations are ascribed to magnetoacoustic oscillations of the plasma column. The boundary conditions prevailing in this case are analyzed in the following. The analysis is complicated by the fact that the plasma column is copper-shielded. The authors discuss two limiting cases, one of which is based on the assumption that the plasma oscillates as if it were completely enclosed by a copper shield. This assumption was found to be correct. The boundary condition  $J_1(kR) = 0$ , where  $kR \equiv \mu = 1.84, 5.3, \dots$

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Magnetoacoustic oscillations and...

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(J - Bessel function), is satisfied here. Using results of Frank-Kamenetskiy the authors obtain the following relation for the frequency of magnetoacoustic oscillations:  $f = \frac{\mu H}{2\pi R \sqrt{4\pi M(n_0 + n_1)}}$ , where M is the ion mass,  $n_1$  is the ion concentration, and  $n_0$  is the concentration of neutral particles. A comparison between experimental and theoretical results obtained for H<sub>2</sub>, N<sub>2</sub>, and Ar shows that: 1) the dependence of the eigenfrequency on the gas mass is in good agreement with theory; 2) the agreement between the theoretical and experimental absolute values of the frequencies is worse, since many important facts have not been considered. Conclusions: Rapid transverse contraction of plasma results in the occurrence of free magnetoacoustic oscillations of the plasma column, which are damped in time. At the instant of maximum contraction of the annular tube of the plasma, "tongues" protruding along the field are ejected (inertial instability). The excitation of oscillations may be attributed to the rapid contraction of the annular tube without a field. The contraction is caused by shock waves. The tube is formed by the mixing of

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27180

Magnetoacoustic oscillations and...

S/056/61/041/002/001/028  
B102/B205

the fields inside and outside the plasma, which have opposite directions. Ye. K. Zavoyskiy is thanked for his interest in the work, and L. I. Rudakov for discussions. There are 6 figures, 1 table, and 10 references: 7 Soviet and 3 non-Soviet. X

SUBMITTED: January 27, 1961

Legend to Fig.1: 1) 50-kv rectifier; 2) capacitor bank ( $27\mu\text{f}$ , 50 kv); 3) gap in the turn for photographing; 4) turn for generating the magnetic field; 5) quartz vacuum chamber; 6) and 8) h-f generator; 7) magnetic probe; 9) starter; a) to pump; b) to oscilloscope; c) directions of photographing.

Card 4/5

KOVAN, I.A.; PATRUSHEV, B.I.; RUBANOV, V.D.; TILININ, G.N.; ~~FRANK~~ KAMENETSKIY,  
D.A.

Effect of spatial amplification of variable magnetic fields in the  
case of magnetoacoustic resonance in a plasma. Zhur. eksp. i teor.  
fiz. 43 no.1:16-20 J1 '62. (MIRA 15:9)  
(Magnetic fields) (Plasma (Ionized gases))

AKHMATOV, A.P.; BLINOV, P.I.; BOLOTIN, V.F.; BORODIN, A.V.;  
GAVRIN, P.P.; ZAVOYSKIY, Ye.K.; KOVAN, I.A.; OGANOV, M.N.;  
PATRUSHEV, B.I.; PISKAREV, Ye.V.; RUSANOV, V.D.; SMOLKIN,  
G.Ye.; STRIGANOV, A.R.; FRANK-KAMENETSKIY, D.A.; CHEREMNYKH,  
P.A.; CHIKIN, R.V.

[Magnetoacoustic resonance in a plasma] Magnito-zvukovoi  
rezonans v plazme. Moskva, In-t atomnoi energii, 1960. 23 p.  
(MIRA 17:2)



RUSANOV, V.D.; PATRUSHEV, B.I.; KOVAN, I.A.; GARKUSHA, V.I.;  
FRANK-KAMENETSKIY, D.A.

[Use of double electric probes in studying magneto-  
acoustic resonance in a plasma] Issledovanie magnitno-  
zvukovogo rezonansa v plazme s pomoshch'iu dvoynykh  
elektricheskikh zondov. Moskva, In-t atomnoi energii  
AN SSSR, 1960. 18 p. (MIRA 17:1)

ACCESSION NR: AT4025314

S/0000/63/000/000/0237/0246

AUTHORS: Kovan, I. A.; Moskvin, Yu. L.; Rusanov, V. D.; Smirnov, V. P.

TITLE: Investigation of plasma parameters in a strong magnetic field with the aid of double electric probes

SOURCE: Diagnostika plazmy\* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 237-246

TOPIC TAGS: plasma, plasma diagnostics, probe method, double probe method, plasma in strong magnetic field, probe method accuracy, Larmor radius, probe characteristic dimensions, charged particle density, electron temperature, saturation current, effect of probe size, probe current, probe current derivative

ABSTRACT: In view of the doubtful reliability of data obtained with probes on a plasma in a strong magnetic field, when the particle

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ACCESSION NR: AT4025314

Larmor radius is comparable with the probe characteristic dimension, the authors have checked on the probe readings by other diagnostic means. The plasma parameters measured were electron temperature and charged-particle density at saturation. The electron temperature was determined by plotting the derivative of the current with respect to the voltage against the probe voltage. The charged-particle density was measured by determining the saturation current and also by measuring the derivative of the probe current with respect to the voltage in the vicinity of zero voltage. The effect of the probe size was also investigated. It is shown that the probe measurements deviate from the others by as much as 40% and become particularly unreliable in strong magnetic fields. Orig. art. has: 5 figures.

ASSOCIATION: None

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 01

SUB CODE: PH

NO REF SOV: 005

OTHER: 003

Card: 2/37

L 20385-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m)/ETC(m)-6 IJP(o) WW/AT

ACC NR: AT6001560

SOURCE CODE: UR/3136/65/000/911/0001/0020

AUTHOR: Kovan, I. A.; Podgorinov, I. M.; Rusanov, V. D.; Smirnov, V. P.; Spektor, A. M.; Frank-Kamenetskiy, D. A.

ORG: Institute of Atomic Energy im. I. V. Kurchatov (Institut atomnoy energii) 72 68

TITLE: Magnetosonic heating of a plasma BH

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-911, 1965. Magnitno-zvukovoy nagrev plazmy, 1-20

TOPIC TAGS: magnetoacoustic effect, magnetoactive plasma, plasma resonance, plasma waveguide, plasma oscillation, plasma heating, magnetic trap/ Vega

ABSTRACT: The authors present results of a study of excitation, propagation, and absorption of oblique magnetic-sound waves in a hydrogen or helium plasma at 10--30 Mcs. More attention than in the past is paid to the excitation of magnetic-sound waves, and particularly magnetic-sound resonance in a confined plasma. Various experiments with direct magnetic-sound waves are discussed and experiments aimed at heating plasma with the aid of oblique waves and magnetic-sound resonance are described. A "Vega" adiabatic trap with high frequency source of cold plasma, designed for this purpose is briefly described. The plasma in these experiments was produced by high frequency discharge, using generators operating at 20--50 Mcs

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ACC NR: AT6001560

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with a nominal power of ~200 kw. The transverse field was produced by discharging a capacitor through a solenoid. The magnetic-field pulse was 20 msec. The investigations have shown that when beyond-cutoff plasma-waveguide conditions are produced resonance accumulation of energy is possible in the plasma column when the magnetic sound wave propagates almost transverse to the static magnetic field. This phenomenon is treated as magnetic-sound resonance at lower radial modes. The spatial amplification obtained in strong magnetic fields corresponds to a resonator  $Q \sim 15$ , assuming that only transverse waves are excited in the resonator. This value of  $Q$  is limited by dissipative mechanisms, particularly nonlinear processes. The study of the oblique magnetic-sound waves has shown that the dissipative processes can be more intense here and that in the case of nonstationary waves of large amplitude a nonlinear dissipation, connected with collective mechanisms, can arise. The experiments have also shown that such a wave can be used to transfer energy effectively to the electronic component. The two plasma heating methods considered (resonant and shock-wave) can be particularly promising for the production of hot plasma in toroidal traps. The authors thank Ye. K. Zavoytskiy, M. A. Leontovich, B. B. Kadomtsev, and V. D. Shafranov for numerous discussions. Orig. art. has: 11 figures and 11 formulas.

SUB CODE: 20/ SUPP DATE: none / ORIG REF: 028/ OTH REF: 003

Card 2/2 BK

KOVAN, V. M.

DECEASED

1963/1

c. July 1962

POWER ENGINEER

See ILC

KOVANDA, Jiri, promovany geolog

Quaternary fresh-water limestone in Czechoslovakia, raw material for agriculture, industry, and export. Geol pruzkum 6 no.11:323-324, 325 N '64.

1. Central Geological Institute, Prague.

KOVANDA, Jiri, promovany geolog

Quaternary freshwater limestone of Czechoslovakia as raw material for agriculture, industry, and export. Pt.2.  
Geol pruzkum 6 no.12:355-357 D '64.

1. Central Geological Institute, Prague.



HOLEMAR, Alois; KOVANDA, Ladislav

Gear milling cutter, spiral-fluted. Stroj vyr 10 no.6:318  
'62.

1. Zdarske strojirny a slevarny, n.p., Zdar nad Sazavou.

KOVANDA, Milan, MUC

Preoperative care in and advantages of blood transfusion in  
hip surgery according to Zahradnicek's method. Acta chir. orthop.  
traum. cech. 24 no.1:70-73 Jan 57.

1. Podle materialu orthopedicke kliniky prof. Dr. B. Frejky v  
Brne.

(HIP, surg.

in child., preop. care & preoper. blood transfusion (Cz))

(PREOPERATIVE CARE, in var. dis.

hip surg. in child (Cz))

(BLOOD TRANSFUSIONS, in var. dis.

same)

FREJKA, B.; KOVANDA, M.

Surgical therapy of congenital hip dislocation. Acta chir. orthop.  
traum. cech. 26 no.5-6:523-541 1959.

1. Ortopedická klinika university v Brne, prednosta prof. dr. B. Frejka.  
(HIP, fract. & disloc.)

KOVANDA, M.;ROTT, Z.

Report on the examination of the hip in newborn infants. Acta  
chir. orthop. traum. cech. 27 no.1:21-28 F '60

1. Ortopedická klinika university v Brne, prednosta prof. MUDr.  
B. Frejka.  
(HIP fract. & disloc.)

BOZDECH, Zdenek; KOVANDA, Milan

Milkmann's syndrome -- a rare form of osteomalacia. Acta chir.orthop.  
traum.cech.27 no.4:378-380 Ag'60.

1. Ortopedicka klinika university v Brne, prednosta prof.dr.  
lek.ved Bedrich Frejka.  
(OSTEOMALACIA case reports)

BOZDECH, Z.; KOVANDA, M.

Changes in the angle between the neck and diaphysis of the femoral bone as a sequel of damage of the greater trochanter following Zahradnicek's operation. Acta chir. orthop. trauma. Cech. 28 no.1:64-66 F '61.

1. Ortopedická klinika University J. Ev. Purkyně v Brně, přednosta prof. dr. B. Frejka, doktor lek. ved.

(HIP fract & disloc)

KOVANDA, M.; ROTT, Z.

Habitual dislocation of the patella. Acta chir. orthop. trauma.  
Cech. 28 no.2:115-117 Ap '62.

1. Ortopedická klinika University J.E.Purkyne v Brne, predn. prof.  
dr. lek. ved B.Frejka.

(PATELLA fract & disloc)

KOVANDA, M.; ROTT, Z.

Etiological factors in congenital hip dislocation. Observations on 1052 children. Acta chir. orthop. traum. cech. 29 no.2:161-165 '62.

] Ortopedická klinika LF University J.Ev.Purkyne v Brne, predn. doc. dr. M.Janecek.

(HIP fract & disloc)



KOVANDOVA, L.

Mechanized preparation of divided powders. Cesk. farm. 11 no.7:  
362-364 s '62.

1. Rozvojove lekarnicke stredisko, Praha.  
(CHEMISTRY, PHARMACEUTICAL)

Veterinary Medicine

BULGARIA

KOVANDZHLEV, Dr. Iv.

"Veterinary-Sanitary Control of Food Products of Animal Origin During Transportation"

Sofia, Veterinarna Sbirka, Vol 63, No 7, 1966, pp 15-17

Abstract: In connection with the increased production and use of food products of animal origin in Bulgaria, instances of spoilage of these products in transportation, particularly as far as meat is concerned, have become more frequent. The reasons are inadequate sanitary inspection of the meat, delays in transportation, and faulty refrigeration in railroad care because of melting of ice when transportation is unduly delayed. Inspection of food products in transport and supervision of their transportation to ensure proper refrigeration and delivery within a period of time during which these products remain fresh are essential.

1/1

KOVANESHNIKOV, A. (UL7HB) (Chimkent KazakhSSR)

Long ago ripened problem. Radio no.12:16 D '58. (MIRA 11:12)  
(Radio, Shortwave--Competitions)

IVANOV, A.I., inzh.; KOVANEV, B.V., inzh.

Over-all mechanization in the repair of diesel locomotives.  
Zhel. dor. transp. 45 no.6:73-76 Je '63. (MIRA 16:7)

1. Nachal'nik lokomotivnogo depo Liski Yugo-Vostochnoy dorogi  
(for Ivanov). 2. Nachal'nik proizvodstvenno-tekhnicheskogo  
otdela depo Liski Yugo-Vostochnoy dorogi (for Kovanev).  
(Diesel locomotives—Maintenance and repair)

IVANOV, A.I.; KOVANEV, B.V.

The workers of the Liski Railroad Repair Shop have won the right for it to be called an enterprise of communist labor. Elek. i tepl. tiaga no.5:8-11 My '63. (MIRA 16:8)

1. Nachal'nik depo Liski Yugo-Vostochnoy dorogi (for Ivanov).
2. Nachal'nik proizvodstvenno-tekhnicheskogo otdela depo Liski Yugo-Vostochnoy dorogi (for Kovanev).  
(Liski—Railroads—Employees)  
(Liski—Railroads—Repair shops)

KOVANEV, B.V.

Reconditioning of the high-pressure fuel pipes. Elek. i tepl.tiaga  
no.8:17 Ag '63. (MIRA 16:9)

1. Nachal'nik proizvodstvenno-tekhnicheskogo otdela depo Liski  
Yugo-Vostochnoy dorogi.  
(Diesel locomotives--Maintenance and repair)

KOVANEV, V. A.

"Innervation of the Splenic Artery." First Moscow Order of Lenin Med Inst,  
Moscow, 1955  
(Dissertation for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis', No. 32, 6 Aug 55

KOVANEV, V.A.

Does ditilin have tachyphylactic properties. Grud. khir. 1 no.4:  
87-90 J1-Ag '59. (MIRA 15:3)

1. Iz laboratorii anesteziologii (zav. - kand.med.nauk V.P. Smol'nikov) Instituta grudnoy khirurgii AMN SSSR (dir. - prof. A.A. Busalov, nauchnyy rukovoditel' - akad. A.N. Bakulev). Adres avtora: Moskva, Leninskly prospekt, d.8, Institut grudnoy khirurgii AMN SSSR.

(CHOLINE)



KOVANEV, V.A. (Moskva, Zh-235, Pervaya Kur'yanovskaya ul., d.12, kv.2)

Innervation of the lienal artery. Arkh. anat. gist. 1 embr. 36 no.4:  
46-50 Ap '59. (MIRA 12:7)

1. Kafedra normal'noy anatomii (zav. - prof. G.F. Ivanov [deceased])  
I Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.  
(ARTERIES, SPLENIC, innervation  
(Rus))

KOVANEV, V.A.

Acute adrenocortical insufficiency; survey of the pertinent literature. Grud. khir. 2 no.1:122-127 Ja-F '60. (MIRA 15:3)

1. Iz laboratorii anesteziologii Instituta grudnoy khirurgii (dir. - prof. A.A. Busalov) AMN SSSR. Adres avtora: Moskva, Leninskiy prosp., 8, Institut grudnoy khirurgii AMN SSSR.  
(ADRENAL CORTEX)  
(STRESS (PHYSIOLOGY))

BEREZOV, Yu.Ye.; KOVANEV, V.A.; POTEKINA, Ye.V.

Unsolved problems in chest surgery. Grud. khir. 2 no.3:115-125  
My-Je '60. (MIRA 15:3)

(CHEST--SURGERY)

KOLESNIKOV, S.A.; HEREZOV, Yu.Ye.; SERGEYEV, V.M.; KOVANEV, V.A.

"Essays on chest surgery" by N.M.Amosov. Reviewed by S.A.Kolesnikov  
and others. Grud. khir. 2 no.5:122-127 S-0 '60. (MIRA 16:5)  
(CHEST--SURGERY) (AMOSOV, N.M.)

KOVANEV, V.A.; FINKEL', I.I.

Stress reaction and its role in postoperative mortality in patients with lung disease. Grud. khir. 2 no.6:76-83 N-D '60. (MIRA 14:1)

1. Iz laboratorii anesteziologii (zav. - kand.meditsinskikh nauk V.P. Smol'nikov) i patomorfologii (zav. - prof. Ya.L.Rajoport) Instituta grudnoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR. Adres avtorov: Moskva, Leninskiy prosp., d.8. Institut grudnoy khirurgii AMN SSSR.  
(ADRENAL GLANDS) (STRESS)  
(LUNGS---DISEASES)

SERGEYEV, V.M., kand.meditsinskikh nauk; KOVANEV, V.A., kand.meditsinskikh nauk

Symposium on the surgery of mitral commissurotomy. Vest.AMN SSSR  
15 no.5:75-81 '60. (MIRA 14:3)  
(MITRAL VALVE--SURGERY)

KOVANEV, V.A., kand.med.nauk; SERGEYEV, V.M., kand.med.nauk

Current problems in thoracic surgery. Vest.AMN SSSR 15 no.6:75-  
84 '60. (MIRA 14:4)

(CHEST---SURGERY)

KOVANEV, V.A., kand.med.nauk

Preoperative medical treatment of patients and anesthesia. *Khirurgiya* 36 no.10:135-142 0 '60. (MIRA 13:11)

1. Iz laboratorii anesteziologii (zav. - kand.med.nauk V.P. Smol'nikov) Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov; nauchnyy rukovoditel' - akad. A.N. Bakulev) AMN SSSR. (ANESTHESIA)



KOVANEV, V.A.; MISTAKOPULO, N.F.; RYABOV, G.A.; SMOL'NIKOV, V.P.

Some properties of muscle relaxants. Vest. khir. 84 no.5:77-81  
My '60. (MIRA 13:12)

(MUSCLE RELAXANTS)

KOVANEV, V.A.

Method of using adrenal cortex hormones in anesthesiological  
practice. Grud.khir. no.3:86-90 '61. (MIRA 14:9)

1. Iz laboratorii anesthesiologii Instituta grudnoy khirurgii  
(dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad.  
A.N. Bakulev) AMN SSSR.  
(ADRENOCORTICAL HORMONES) (ANESTHESIOLOGY)

BEREZOV, Yu.Ye.; SERGEYEV, V.M.; KOVANEV, V.A.

Surgery on the open heart under conditions of artificial  
blood circulation and hypothermia. Grud.khir. no.3:117-125  
'61. (MIRA 14:9)  
(HEART---SURGERY) (PERFUSION PUMP (HEART)  
(HYPOTHERMIA)

KOVANEV, V.A., kand.med.nauk; BUYANOVA, N.N.

Acute adrenocortical insufficiency in a case of undiagnosed  
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AMN SSSR i fakul'tetskoy khirurgicheskoy kliniki (zav. - akad.  
A.N. Bakulev) II Moskovskogo gosudarstvennogo meditsinskogo insti-  
tuta.

(ADDISON'S DISEASE) (ADRENOCORTICAL HORMONES)

GEL'SHTEYN, G.G.; KOVANEV, V.A.; SEROV, V.V. (Moskva)

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AMN SSSR prof. A.I.Strukov) i Instituta grudnoy khirurgii AMN SSSR.  
(ELECTROCARDIOGRAPHY) (KIDNEYS—DISEASES)

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(PHENOTHIAZINE)

(ANESTHESIOLOGY)

KOVANEV V. A.

1st European Congress of Anaesthesiology, 3-7 Sep 62, Vienna

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ABSTRACTS

- RYABOV, G. A. Principles of Management of the Body Functions in Superficial and Profound Hypothermia in Children with Congenital Heart Disease
- КОВАНЕВ, В. А. (Interaction of Muscular Relaxants and Corticosteroids in the Modern Anaesthesia for the Operations on the Heart  
АНДРЕЕВСКИЙ, Я. М.
- ZOLNIKOV, S. M. Some Problems of Anaesthesia for Children with Congenital Heart Disease  
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- GEVORCIAN, I. S. Arterial Anaesthesia as a  $\gamma$  Sort of Local Anaesthesia
- SMOLNIKOV, V. P. The Shane Effect and Pauling's Theory of Anaesthesia



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S.A. Kolesnikov, nauchnyy rukovoditel' -- akad. A.N. Bakulev)  
AMN SSSR.

(MITRAL VALVE---DISEASES) (BLOOD PRESSURE)  
(RESERPINE)

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S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev)  
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