

GAMKRELIDZE, P.D., otv.red.; GVAKHARIYA, G.V., red.; DZOTSENIDZE, G.S., red.; ZARIDZE, G.M., red.; KACHARAVA, I.V., red.; RUBINSHTYTH, M.M., red.; TSAGARELI, A.L., red.; CHELIDZE, G.F., red.; CHIKHELIDZE, S.S., red.

[Collection of papers in honor of Aleksandr Illarionovich Dzhanelidze] Sbornik trudov; Akademiku Akademii nauk Gruzinskoi SSR Aleksandru Illarionovichu Dzhanelidze k nemidesiatiletiiu so dnia rozhdeniia i piatidesiatiletiiu nauchno-pedagogicheskoi i obshchestvennoi deiatel'nosti. Tbilisi, 1959. 490 p.

(MIRA 12:12)

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GVAKHARIYA, G V

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BARSHTV, G. P. Minerals and Mineralium Classification A. V. Krasovskiy, Moscow - Minerals and Their Classification

BRESE, Alexander A., Institute of Mineralogy, Geology and Crystallography of Bure Kemavsky, Academy of Sciences USSR /1960 position/ Association of metamorphic minerals in certain interlayered bodies of leucocratic gneiss

CHURKOV, Aleksandr V., Dr., Institute of Geology of Mineral Deposits, Petrography, Mineralogy, and Geochemistry, Academy of Sciences USSR /1960 position/

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GENKIN, Aleksandr D., Institute of Geology of Mineral Deposits, Petrography, Mineralogy and Geochemistry, Academy of Sciences USSR - "New data on minerals of the 1st group from the Ch-M deposits of the USSR"

GOLOVIN, A. A., Institute of Geology and Geophysics, Siberian Department, Academy of Sciences USSR, Novosibirsk - "Remarks on the selection of biotite of the 'Kayskharit'"

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IVANOV, A. P., Prof., Kazakhstan Akhmat, Mr.-Ali, Academician Secretary of the Department of Geology and Chemical Sciences, Academy of Sciences Azerbaijanian SSR, Baku - Mineralogy and origin of the pyrites types of deposit

IZHURIN, Aleksandr A., Prof., Leningrad State University, Chair of Geochemistry /1960 position/

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Turquoise from the Madneuli deposit. Min. sbor. no.16:410-415 '62.
(MIRA 16:10)

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GVAKHARIYA, G.V.; NAZAROV, Yu.I.

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[Geology, mineralogy and geochemistry of lead-zinc and complex metal deposits in Georgia] Geologia, mineralogia i geokhimiia svintsovo-tsinkovykh i polimetallicheskiikh mestorozhdenii Gruzii. Tbilisi, Izd-vo AN Gruz.SSR, 1963. 369 p. (AN Gruz. SSR. Geologicheskii institut. Monografii, no.12)

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Genetic analysis of the flowoff of the river Kura and its tributaries.
Trudy Tbil. NIGMI no.2:222-234 '57. (MIRA 11:4)
(Kura River--Banoff)

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1. Tbilisskiy nauchno-issledovatel'skiy gidrometeorologicheskiy
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GVAKHARIYA V.K.

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Gamma-ray relay with a magnetic amplifier. Biul.tekh.-ekon.inform.-
Gos.nauch.-issl.inst.nauch. i tekh.inform. no.4:43-44 '62.
(MIRA 15:7)

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GVALADZE, G.Ye.

Embryology of *Allium schoenoprasum* Soob. AN Gruz. SSR 25
no. 3:327-334 S '60. (MIRA 14:1)

1. Akademiya' nauk Gruzinskoy SSR, Institut botaniki, Tbilisi.
(Chives)

GVALADZE, G.Ye.

Studying the embryology of the genus *Allium* L. Soob. AN Gruz. 26
no. 2:193-200 '61. (MIRA 14:4)

1. Akademiya nauk Gruzinskoy SSR, Institut botaniki, Tbilisi.
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QV LAD' II, G. Ye.

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1. Institut botaniki AN GruzSSR, Tbilisi. Submitted Feb. 17,
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red.izd-vs; TODUA, A., tekhn.red.

[Efficient use of fertilizers in viticulture] Ratsional'noe
ispol'zovanie udobrenii v vinogradarstve. Tbilisi, Izd-vo Akad.
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JAVRISHVILI, A. K., KAZAROV, R. E., KURIDZE, R. V. and KHALDEIVA, I. I.

"Angular Distribution of the Penetrating Component of Extensive Air Showers
at the Depth of 200 m.w.e."

Report presented at the International Conference on Cosmic Rays and
Earth Storm, 4-15 Sep 61, Kyoto, Japan.

Physical Institute, Academy of Sciences, Georgia, SSR

4

3.24/0

S/048/62/026/005/019/022
B108/B102

AUTHORS: Andronikashvili, E. L., Bibilashvili, M. F., Vardenga, G. D.,
Gvaladze, T. V., Dzhavrishvili, A. K., Kazarov, R. Ye.
Kuridze, R. V., and Khaldeyeva, I. V.

TITLE: Angular distribution of the penetrating component of exten-
sive atmospheric showers at a depth of 200 m water
equivalent

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,
no. 5, 1962, 682-684

TEXT: The angular distribution of the axes of extensive atmospheric
showers was determined by various methods, mainly using a cloud chamber.
The direction of the axis was established from the electron-photon
component. At a distance of $0.5H$ or less from the shower axis (H = depth
at which the detector is placed under the surface), the particle
distribution is given by $I_{\theta} = I_0 \cos^{8.3\theta}$, as has been established by various
authors. The present authors' results agree with this law. There are
2 figures.
Card 1/1

✓
B

ACCESSION NR: AP4011484

S/0051/84/016/001/0058/0062

AUTHOR: Gvaladze, T.V.; Konyukhov, V.K.; Prokhorov, A.M.; Khaimov-Mal'kov, V.Ya.; Shipile, G.P.

TITLE: R-absorption lines of ruby

SOURCE: Optika i spektroskopiya, v.18, no.1, 1984, 58-62

TOPIC TAGS: R absorption, R levels, R line luminescence, ruby, optical pumping, lasers, luminescence lifetime

ABSTRACT: Although there have been many investigations of the luminescence of R-lines of ruby, hitherto there have been no detailed studies of the absorption in the region of these lines. Study of the absorption can yield information on the frequency variation of the absorption coefficient, $\alpha(\nu)$, and the temperature dependence of $\int \alpha(\nu) d\nu$, which is indicative of the temperature variation of the matrix element of the dipole moment. In the present work the R-line absorption of ruby (Cr_2O_3 concentration 0.04% by weight) was investigated at 16, 60, and 95°C. The measurements were performed with the aid of a DFS-13 diffraction grating spectrograph (dispersion 4 Å/mm) with photographic recording and a DFS-8 grating spectrograph (6 Å/mm) with

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ACC.NR: AP4011484

photoelectric recording. The values of $\alpha(\nu)$ for the R_1 and R_2 lines are 0.315 and 0.24, respectively, and are virtually temperature independent in the 16 to 95°C temperature range. Reabsorption was found to be negligible under the given conditions. The luminescence lifetimes of the R_1 and R_2 lines, calculated on the basis of the experimental data, are of the order of 2.9 and 4.2 microsec, respectively. The relative intensities of the R luminescence lines are proportional to the populations of the respective levels and inversely proportional to $\nu(R)$. The R_2/R_1 intensity ratio for $T = 93^\circ\text{K}$, derived from the present data, is about 0.43, which is in exact agreement with the experimental value of N.A.Tolstoy, Liu Shun-fu, and M.E.Lapidus (Opt.i spektro., 13, 242, 1962). Orig.art.has: 14 formulas, 2 tables, and 1 figure.

ASSOCIATION: none

SUBMITTED: 18Mar63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NR REF SOV: 003

OTHER: 005

Card 2/2

L 25284-65 EWG(j)/EWA(k)/FBD/EAT(l)/EWP(e)/EBC(k)-2/EBC(t)/T/EBC(b)-2/EWF(l)/ENT(z)/
EWA(m)-2/EWA(h) Pn-l/Pg-l/Pf-l/Pi-l/Pl-l/Peb IJP(c) WD/WH 66
65

ACCESSION NR: AP5004381

S/0056/65/048/001/0106/0110

AUTHOR: Gvaladze, T. V.; Krasnyk, I. K.; Pashinin, P. P.; Prokhlindeyev, A. V.;
Prokhorov, A. M.

TITLE: Characteristics of a ruby laser with pulsed Q-modulation

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 1, 1965,
106-110

TOPIC TAGS: ruby laser, laser, Q modulation, Q spoiler, laser experiment, laser
beam spectroscopy, laser induced air breakdown

ABSTRACT: An experimental study has been made of a ruby laser with an output power of up to 50 Mw for a pulse length of 40—50 nanoseconds. The ruby rod was 115 mm long, 12 mm in diameter, water cooled, and coated at the ends. The Q-modulator was a total-internal-reflection prism rotating at 425 rps. The semitransparent mirror was of the chemically deposited dielectric type, with reflection coefficient varying from 70 to 1.6% (substrate without coating). High-power pumping produced two separate output pulses. Gain was plotted as a function of pumping energy, using an elliptical reflector and an ¹⁵FF-5000 lamp. The value of gain was determined with respect to the threshold power and various reflection coefficients

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ACCESSION NR: AP5004381

of the mirrors without the Q-spoiler. It was possible to obtain a gain over 0.25 cm^{-1} in the central regions of the crystal with coated ends. Using the Q-spoiler, maximum energy per pulse was obtained with a K-8 glass substrate without dielectric coating for the mirror. The experiment thus confirmed the theoretical conclusion that high-transmittivity mirrors are preferable if gain is large enough and internal losses small. The spectrum of the laser output beam consisted of from 1 to 7 narrow lines, some of which broadened to a maximum of 0.15 cm^{-1} with increased pump power. The total width of the spectrum was 1.5 cm^{-1} at low power, and narrowed down to a mean of 0.6 cm^{-1} at higher power. A mirror substrate less than 3 mm thick produced a single line 0.1 cm^{-1} wide with very good directivity. This is considered one of the most convenient methods of producing narrow-line giant pulses at room temperature. Focusing of the beam in air produced a spark at output powers of 5-10 Mw. An uncoated mirror impervious to burnout was used in the spark experiments. Orig. art. has: 10 formulas and 1 figure. [SK]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 18Jul64

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 006

ATD PRESS: 3184

Card 2/2

9.3150,24.2120

30/01-30-01/10

AUTHORS: Kvantakova, I. F., Kervalline, K. N., Gvaladze, Ya. S.

TITLE: Some Magneto-Hydrodynamic Effects Observed During the Pulse Compression of Plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, No 3, pp 297-305 (USSR)

ABSTRACT: In connection with the problem of controlled thermonuclear reactions there is a growing interest in the properties of plasmas compressed by pulses in strong magnetic fields. As known, attempts to use linear and induction pinch for heating deuterium plasma up to thermonuclear temperatures were not successful, mainly because of significant reduction in ohmic heating of plasma at high ($> 10^6$ K) temperatures and presence of instabilities which lead to a worsening of magnetic thermal insulation of high temperature compressed plasma. The authors show the presence of instabilities consisting of ejections of plasma formations from

Card 1/9

Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasma

7.541
SOV/57-30-3-7/15

Induction and linear pinches representing apparently one of the forms of type $m > 1$ instabilities. They deduce from theoretical considerations and experimental evidence that it should be impossible to achieve thermonuclear temperatures by single pulse compression of plasmas. Also they investigated some other properties of induction pinch using the apparatus in Fig. 1. The battery of capacitors (10-200 μ F) was connected by means of special leads reducing total inductance of the system to a minimum of 0.01 μ H. Working potential was 50 kv; maximum rate of increase of current was 10^{12} a/sec. Firing system allowed a synchronization of discharge time to approximately 1 μ sec. Continuous photoregistration was performed by photocamera SFR-2M synchronized with discharge time, oscillograph sweep, and rotation of the spread-out mirror. Currents were measured by pulsed two-ray oscillograph OK-17 with a waiting sweep. Tests were performed

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Some Magneto-hydrodynamic Effects Occurring
During the Pulse Compression of Plasma

1964
10-11-10-11-1

in hydrogen at various pressures. Pictures were taken in the radial and axial direction with respect to the chamber axis, having the apparatus slit perpendicular or parallel to the chamber, respectively. In general, during discharge of condensers through the system of windings, a uniform axial magnetic field H appears in the chamber. This field varies with current variations and induces electrical fields which ignite the electrodeless discharge. Secondary currents circulate in planes perpendicular to the axis of the chamber. Whenever these currents are opposed to primary currents in the windings, the field inside the plasma decreases. The resulting drop in magnetic field pushes the plasma away from the walls of the chamber, squeezing it into the pinch. The equilibrium diameter of the pinch is determined by the equilibrium of pressures of the outside field, the magnetic field trapped inside the pinch, and the gas inside the pinch. Analyzing pictures for the case of hydrogen pressure $P_H = 0.2 \text{ mm Hg}$, $d = 40 \mu$, and $U_0 = 30 \text{ kv}$, the authors found that

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Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasma

1964
SC 51-10-2-1117

during the final stage of the formation, the plasma oscillates radially around the equilibrium diameter. During the middle of the half-period the pinch diameter decreases with a simultaneous decrease in luminosity. Primary currents reach their maximum, secondary currents disappear, and the pinch cools down somewhat. During the second half of the half-periods the pinch again starts to shrink because of reversed eddy currents, conserving the original diameter. Only after the end of the half-period when the external field vanishes, the plasma begins slowly to spread out. In these and similar pictures the authors did not observe any $m = 0$ or $m = 1$ instabilities, nor did they find them in the case of linear pinch. These findings are contrary to the theory that allows axial motion of plasma through the magnetic "envelope" of the pinch and would cause $m = 0$ or $m = 1$ instabilities. The authors conclude that existing theories do not take sufficiently into

Card 4/9

Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasma

1971

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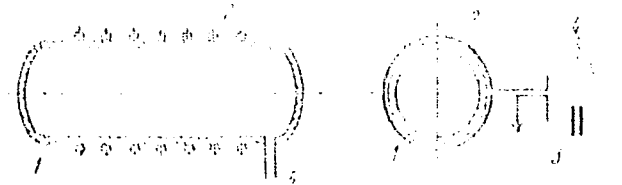


Fig. 1. (1) discharge chamber; (2) windings;
(3) battery of capacitors; (4) interconnecting spark
discharge; (5) pumping tube.

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Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasma

77841
SOV/57-30-5-7/15

account the real processes occurring during the pinch formation. Analysis of pictures taken under changed conditions shows, among other things, that with $C = 13 \mu\text{F}$ and $U_0 = 40 \text{ kV}$ one can observe excitation shock waves reflected from the axis of the induction pinch which produce radial oscillations of the pinch and ejection of plasmoids. Apparently this represents one of the $m \times 1$ type instabilities which the authors call eruptive instability. To achieve an ejection of the surface layer of the plasma one needs a magnetic field under that layer which could separate it from the rest of the plasma and compensate the outside field. This can occur at the expense of the kinetic energy of radial motion, and using appropriate probes registering dl/dt quantity the authors showed existence of such a strong inverse magnetic field. Any asymmetry in radial motion then could be responsible for asymmetry in ejection of the plasmoids. Using such asymmetries and conservation of momentum.

card 6/9

Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasma

Y. Itoh
SOM/ST-300-1771

The authors found mass of the plasmoids to be $\sim 10^{-10}$ - $4 \cdot 10^{-11}$ gm, which constitutes a few percent of its total mass. Although this could not provide any appreciable consumption of energy, it leads to a worsening of thermal insulation of the pinch, which could represent an effect of fundamental importance. The authors note that the eruptive instabilities of pinches could be suppressed by choosing appropriate field configurations; e.g., a field increasing with increase of its radius R. Finally, the authors note that the heating of the plasma occurs at the expense of the kinetic energy of its electrodynamic compression, and the aim of experiments is, therefore, to achieve a high velocity of compression. Starting from field energy equations, the authors develop an equation for the average velocity of plasma motion

$$\bar{v} = \frac{8kIU_0}{H^2(R+r_0)}$$

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Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasma

77841
SOV/97-10-3-1/15

where I is primary current, U_0 is initial emf, k is a proportionality constant, and H_0 is outside magnetic field. Experiments showed that the experimental maximum compression velocity agrees with the order of magnitude of computed value for V . Discarding the equation

the authors note that the optimum compression velocity of plasma depends very little on power of impulse $I U_0$.

It is therefore impossible to achieve in the induction pinch compression velocities higher than 10^7 cm/sec.

Experiments show the same is true for other methods of pulse compression of plasma. After investigating the mechanism of the process which leads to the situation where the acceleration is achieved in a relatively short lapse of time while the rest of the period the source of energy idles, the authors conclude that one cannot achieve thermonuclear temperatures by a single pulse compression of the pinch. One apparently needs a process during which plasma will be subjected to multiple expansion and then intensive compression.

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Some Magneto-Hydrodynamic Effects Observed
During the Pulse Compression of Plasmas

Sci. Rep. 10-1-1959

At the same time one would need very strong magnetic fields to suppress eruptive instabilities of the pinch. There are 4 figures; and 24 references, 13 Soviet, 6 U.K., 5 U.S. The most recent U.K. and U.S. references are: J. L. Craston, et al., Second Geneva Conference on the Peaceful Uses of Atomic Energy, Paper 15, 34, 1958; S. A. Colgate, R. F. Furth, Science, 128, Nr. 3320, 337 (1958); O. A. Anderson, W. R. Baker, S. A. Colgate, J. Ise, Jr., R. V. Pyle, Proc. 3-rd Intern. Conf. on Ionization Phenomena in Gases, Venice, 1957; L. C. Burkhardt, et al., J. Appl. Phys., 28, 519 (1957); B. H. Bostick, Phys. Rev., 106, 406 (1957).

SUBMITTED: October 24, 1959

Card 9/9

84560

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S/057/60/030/011/003/009
B006/B054

26.232/
AUTHORS:

Kvartskhava, I. F., Kervalidze, K. N., and Gvaladze, Yu.S.

TITLE:

Instability of an Inductive (Theta) Pinch /9

PERIODICAL:

Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 11,
pp. 1321-1328

TEXT: The authors studied one of the forms of plasma instability with which an eruption of local plasma formations from the surface of a strongly compressed pinch can be observed. They call this form "eruptive instability". The authors had already reported on this subject at the 4th International Conference on Ionization Phenomena in Gases (Upsala, 1959). The investigations were made by means of a series of slow-motion pictures ($2 \cdot 10^6$ per second) of theta and zeta pinches. The pictures were taken with a rotating mirror through a narrow slit from the terminal surface of a cylindrical chamber in axial direction. As these experiments had been described earlier, the authors only discuss the results of this photographic method. A photographic camera of the type COP-2M (SFR-2M) was used. The experiments were made with hydrogen, helium, nitrogen, air

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Instability of an Inductive (Theta) Pinch

S/057/60/030/011/003/009
B006/B054

argon, and krypton at different pressures. It was shown, among other things, that the effects observed depended greatly on the shape of the chamber cross section. The photographs taken are partly shown in Figs. 1 and 2, and the corresponding experimental conditions are given in Tables 1 and 2, respectively. In the following, the individual photographs and their conditions are described and discussed. The investigations showed that all plasma motions are very complicated, and that the instabilities of the pinches are of different forms. A relationship was found to exist between the character of plasma motion and the form of instability. In the pressure range from a few mm Hg up to 10^{-2} mm Hg, it was found that the intensity of eruptive instabilities increased with decreasing pressure, and at still higher pressures, such instabilities do no longer occur. $nkT > H^2/8\pi$ is a necessary condition for the occurrence of an eruption ($nkT =$ thermal pressure of plasma). There are 2 figures, 2 tables, and 12 references: 3 Soviet, 1 German, 3, British, 2 US, and 3 Swiss.

SUBMITTED: May 30, 1960

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Таблица 1
(длина камеры 100 см)

Рис. 1	Напряже-ние на конденса-торах, кв	Емкость конденса-торов, мкф	Длина катушки, см	N макс, кг	№ полу-протода тока	Давление газа, мм рт. ст.	Диаметр камеры, см	Материал камеры
а б в г д е ж з и к л м н о	30	90	55	12	1	Воздух, 10^{-1}	27	Фарфор
	30	90	55	12	1		27	
	30	90	15	35	1	Kr, 10^{-1}	27	
	30	90	15	35	1		27	
	30	90	55	10	2	Kr, $8 \cdot 10^{-2}$	27	
	25	90	55	10	2		27	
	30	90	15	35	2	He, $7 \cdot 10^{-2}$	27	
	30	90	15	35	2		27	
	30	180	55	18	2	He, $5 \cdot 10^{-2}$	27	
	30	60	55	10	1		27	
30	60	55	10	2	He, 10^{-1}	10	Кварц	
30	60	55	10	2		5		
30	90	38	40	1-2	He, $5 \cdot 10^{-3}$	27	Фарфор	
30	90	38	40	1-2		27		
30	60	15	70	1	He, $8 \cdot 10^{-2}$	27		
30	60	15	70	1		27		
28	90	15	35	1	Hg, $3 \cdot 10^{-1}$	27		
28	90	15	35	1		27		
28	120	55	13	3-4	He, $3 \cdot 10^{-1}$	27		
28	180	55	16	2		27		

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Таблица 2

(Длина камеры: a — и — 50 см, k — 100 см)

Рис. 2	Исправленое да конденса- торов, мк	Емкость кон- денсаторов, мкФ	Форма катушки	Длина катуш- ки, см	D_{max} , мм	№ волюме- роста тона	Давление газа, мм рт. ст.	Площадь се- чения, мм ² Рт. ст.	Материал камеры		
а б в г д е ж з и к	30	60	Круглая	15	25	1	Воздух 10^{-1}	490	Стекло		
	30	60		15	25	2		490			
	30	90		20	30	1		490			
	30	90	Квадратная Прямо- угольная	40	35	1	He, $5 \cdot 10^{-2}$	240			
	30	90		40	35	2		240			
	30	60		15	20	2		Ar, 10^{-1}		220	
	30	60	Круглая	12	45	1	He, $4 \cdot 10^{-1}$	200		Кварц	
	30	60		12	45	1		He, 10^{-1}			200
	30	60		12	45	3—4	He, $5 \cdot 10^{-2}$	200			
	30	60		12	45			200			
	30	90		15	35	1	N ₂ , $2 \cdot 10^{-1}$	600			Фарфор

Card 4/6

84560

S/057/60/030/011/003/009
B006/B054

Legends of the tables:

Table 1 (Chamber length 100 cm)							
Fig. 1	Capacitor voltage [kv]	Capacitance [μ f]	Coil length [cm]	H max [kilo-gauss]	No. of the half-cycle of the current	Gas pressure [mm Hg] air	Chamber diameter [cm]
						Material of the chamber	
						porcelain	
						quartz	
						porcelain	✓

Card 5/6

84560

S/057/60/030/011/003/009
B006/B054

Table 2
(Chamber length a-u-50 cm, k - 100 cm)

Fig. 2	Capacitor voltage [kv]	Shape of the coil	Gas pressure	Material of the chamber
	Capacitance [μ f]	round square rect- angular round	[mm Hg] air	
	Coil length [cm]	H_{max} [kilogauss]	Area of the chamber cross section [cm ²]	
		No. of the half-cycle of the current		

Card 6/6

83610

S/056/60/038/005/043/050
B006/B063

26.2321

AUTHORS: Kvartskhava, I. F., Kervalidze, K. N., Gvaladze, Yu. S.

TITLE: Instability of an Induction Pinch

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 5, pp. 1641 - 1643

TEXT: The present "Letter to the Editor" gives a fundamental representation of plasma motion in inductive (theta) pinches, and describes the experimental conditions under which the accompanying photographs were taken. At the Fourth International Conference on Ionization Processes in Gases, held at Upsala in 1959, the authors gave a report on the new kinds of instability of linear and inductive pinches, which had been observed during a compression shock in a plasma. These phenomena had been detected photographically. In the present paper, the authors report on further investigations carried out with a quick-acting camera of the type COP-2M (SFR-2M). The effects of the instability of θ -pinches were recorded on a time magnifier basis. These effects are related to an azimuthal inhomogeneity of the velocities of the radial motion of the

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83610

Instability of an Induction Pinch

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plasma during the compression shock. The various experimental conditions are given in a table. Glass or porcelain vessels served as discharge chambers, and air, nitrogen, and helium (pressures of 0.1 torr; one experimental series was performed with He at 0.07 torr) were used as discharge gases. The accompanying Fig. reproduces some of the photographs, the major part of which were taken in cylindrical discharge chambers. Those in the last two rows were taken in chambers with square cross sections. The exposure was 0.5 μ sec, and there was an interval of 2 μ sec between the various exposures. The photographs are described in detail along with the forms of the individual columns and the effect of the compression shock on them. All these effects vanish at higher gas pressure. Also in the case of smaller chamber diameters, they are largely reduced or absent. These phenomena are primarily due to the magneto-hydrodynamic character of plasma motion in the magnetic field. For example, the azimuthal rotation of the expansion figures of the pinch in comparison to the compression figures is indicative of the significant role played for these processes by the reflection of shock waves at the magnetic fields captured by the plasma. The changes of the spatial figures are such as to remind one of the phenomena of an elastic

Card 2/3

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Instability of an Induction Pinch

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body whose "coefficient of elasticity" is largely dependent on the direction of the magnetic field. A qualitative analysis of the data obtained shows that the plasma is not in equilibrium when it is in the maximum compressed state. Comparatively weakly damped intense macroscopic motions are induced in it, which lead to eruptive instabilities. The latter render it difficult to obtain a high-temperature plasma in pulsed processes. Details of these investigations will be published at a later date. There are 1 figure, 1 table, and 1 Soviet reference.

SUBMITTED: January 23, 1960

Card 3/3

X

KOMETIANI, P.A.; Prinsipali uchastiya: KLEBA, Ye.E.; CHIKVAITSE, V.N.; GVALIYA, N.V.; IORDANISHVILI, G.S.

Relation between amino acid transformations and ammonia metabolism in the brain. Ukr.biokhim.zhur. 37 no.5:721-733 '65.

(MIRA 18:10)

1. Institut fiziologii AN GruzSSR, Tbilisi.

Gvaliya, T.M.

21726
S/123/61/000/003/002/023
AC03/A104

18.11SD 1416

AUTHORS: Tavadre, F. N.; Takitishvili, M. D.; Dolianovili, K. A.;
Mandzhgalovze, S. N.; Gvaliya, T. M., and Nabichvrianvili, M. L.

TITLE: Effect of carbon and silicon on the heat resistance and scale
resistance of alloys of the iron-chrome-manganese system

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 3, 1961, 17, abstract
3A114. ("Dokl. Nauchno-proizv. konferentsii mashinostroyeniya i
priborostroyeniya". Leningrad, Sudpromgiz, 1959, 169-iB)

TEXT: The authors investigated by the centrifugal method changes in the
heat resistance of two series of Fe-Cr-Mn-alloys (15% Mn; 15 and 15% Cr) at 700
and 750°C under stresses of 5 - 15 kg/mm² during 250 - 500 hours depending on the
C-content (0.5 - 4%) and Si-content (0.2 - 7.0%). The tests were carried out
with cast and heat-treated specimens. In a stabilized condition an increase in
the C- and Si-contents reduces the heat resistance. The alloys resist oxidation
up to 750°C.
E. Gini

[Abstractor's note: Complete translation]

Card 1/1

GVALIYA, T.M.

Effect of titanium and aluminum on the properties of chromium-
manganese steels and cast iron. *Trudy Inst. met. AN Gruz.*
SSR 11:163-176 '61. (MIRA 14:10)

(Chromium-manganese alloys)

(Titanium)

(Aluminum)

8/123/62/000/016/001/013
AC04/A101

AUTHOR: Gvaliya, T. M.

TITLE: Effect of titanium and aluminum on the properties of chrome-manganese steel and cast-iron grades

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 16, 1962, 18, abstract 16A102 ("Tr. In-ta metallurgii. AN GruzSSR", 1961, II, 163 - 176)

TEXT: Investigations were carried out to study the effect of modifying and alloying with Ti (0.04 - 0.67%) and Al (0.01 - 4.75%) on the following properties: heat resistance, scale resistance, corrosion resistance in 5% H₂SO₄ and NaCl solutions, and also on the microstructure, electric resistivity, macro- and microhardness of chrome-manganese steel and cast-iron grades. It was found that, under the effect of the studied additions, an austenite decomposition can be observed. The addition of Ti and Al sharply improves the heat resistance and does not affect the scale resistance. Ti improves the corrosion resistance in the enumerated media. The Al-modification does not change the corrosion resistance while an Al-alloying reduces the destruction rate. There are 25 references.

[Abstracter's note: Complete translation]
Card 1/1

TRENCSENI, Tibor, dr.; SZILVESZTROV, Vlagyimir, dr.; GVALJA, Ilja, dr.

Primary fibrosarcoma of the cardiac ventricle diagnosed during life. Orv.Hetil.105 no.22:1023-1028 My 31 '64.

1. Szovjet Hadsereg, Egészegügyi Szolgalat es Magyar Nephadsereg, Egészegügyi Szolgalata.

Name: GVAMICHAVA, Andrey Romanovich

Dissertation: Materials for the study of the patho-
geny and pathogenic treatment of burns
(clinical and experimental study)

Degree: Doc Med Sci

Affiliation: [not indicated]

Defense Date, Place: 9 Feb 56, Council of Tbilisi State
Med Inst

Certification Date: 6 Jul 57

Source: BMVO 18/57

T-4

USSR/Human and Animal Physiology. Blood. Hematosis.
Abs Jour: Ref Zhur-Biol., No 12, 1958, 55415.

Author : Gvanichava, L.R., Garsiashvili, K.L.
Inst : Tbilisi State Institute of Medicine.
Title : Peripheral Blood and Hematotic Organs After Stomach
Resection.

Orig Pub: Tr. Tbilissk. gos. med. in-ta, 1956, 9, 331-335.

Abstract: The peripheral blood, the bone marrow, the liver,
and the spleen of patients who underwent stomach
resection were repeatedly examined for a period of
10 years. In all of the cases the hematosis within
the bone marrow was of a normoblastic character,
with a delayed erythroblast ripening. Cases of hyper-
chromic or pernicious anemia were absent. Hypochromic
anemia developed in 17 percent of the cases, and,

Card : 1/2

USSR/Human and Animal Physiology. Blood. Hematosis.

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55415.

T-4

with a few exceptions, yielded to general medical treatment. Thus, due to the vicarious and compensatory mechanism, a stomach resection does not lead to a disturbance of the antipernicious factor.

Carl : 2/2

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GVAMIGHAVA, A.d.; TELIA, A.V.; ZEN'KO, N.I.

[Bezoars of stomach and intestines in man] Bezoary zheludka i
kishok u cheloveka. Tbilisi, Sabchota Sakartvelo, 1958. 80 p.
(BEZOAR) (MIRA 11:9)

GVAMICHAVA, N.E.

Group B vitamin content of soils in the Mukhrani region. Vest.
Bot. ob-va Gruz. SSR. no.1:115-121 '62. (MIRA 17:1)

GVAMICHAVA, N.E.

Seasonal dynamics of the vitamin content of the red soil of
Anaseuli. Soob. AN Gruz. SSR 28 no.6:693-698 Je '62.

(MIRA 15:7)

1. Akademiya nauk Gruzinskoy SSR, Institut botaniki, Tbilisi.
Predstavleno akademikom L.I. Dzhaparidze.

(Vitamins) (Anaseuli--Red soils)

GVAMICHAVA, N.E.

Micro-organisms as a source of vitamin accumulation in soils.
Soob. AN Gruz. SSR 28 no.2:223-226 F '62. (MIRA 15:3)

1. AN GruzSSR, Institut botaniki, Tbilisi. Predstavleno
akademikom L.I.Dzhaparidze.
(Soils--Microbiology) (Vitamins)

GABUNIYA, R.I.; AKHMETELI, T.I.; GVANTSELADZE, O.D.

Electrocardiographic changes related to the treatment of
thyrotoxicoses with radioactive iodine. Soob. An Gruz. SSR.
25 no. 4:485-488 0 '60. (MIRA 14:1)

1. Akademiya nauk Gruzinskoy SSR, Institut eksperimental'noy i
khlinicheskoy khirurgii i gematologii, Tbilisi. Predstavleno
Akademikom K.D. Eriatavi.

(HYPERTHYROIDISM) (IODINE--ISOTOPES)
(ELECTROCARDIOGRAPHY)--

GVANTSELADZE, O.D.; AKHMETELI, T.I.

Electrocardiographic changes in adhesive pericarditis. Trudy Inst.
eksp.i klin.khir.i gemat. AN Gruz.SSR 10:127-132 '62.

(MIRA 16:2)

(ELECTROCARDIOGRAPHY) (PERICARDITIS)

BUACHIDZE, V.N.; NATSVLISHVILI, G.A.; GVANTSELADZE, O.D.; KAZARO, I.L.

Role of ergometry, spirometry, and electrocardiography in evaluating the functional state of the heart muscle in thyrotoxicosis. Soob. AN Gruz. SSR 39 no.1:225-230 J1 '65.

(MIRA 18:10)

1. Institut eksperimental'noy i klinicheskoy khirurgii i gematologii AMN SSSR, Tbilisi. Submitted November 9, 1964.

GVANTSELADZE, V.I.

Mechanism of the action of Zvare mineral water on the exocrine function
of the pancreas. Soob. AN Gruz. SSR 35 no.2:445-452 Ag '64.
(MIRA 17:12)

GVANESHLADZE, V. S.

"Results of Treating Children with Rheumatism at the Sochi-Matsesta Health Resort," Vop. Ped. i Okhran. Mater. i Det., 16, No. 4, 1948.

State Balneological Sci. Res. Inst. imeni Stalin at the Sochi-Matsesta Health Resort.

GVANTSEBLADZE, V. S.

"Final Results of the Treatment of Infantile Rheumatic Cases in the Sochi-Matsesta Health Resort," Sov. Med., No. 5, 1949.

Children's Clinic, Balneological Sci. Res. Inst. im. I. V. Stalin, at the Sochi-Matsesta Health Resort.

CHANTYLADEB, V. S. and SAMSONOVA, T. I.

"Effect of Balneo-Climatotherapy on Certain Immunologic and Hematologic
Indexes in Rheumatism in Children," Vop. pediat. i okhr. mat. i det., 20, No.1,
1952

GVANTSSELADZE, V.S.;SAMSONOVA, Z.I.

Effect of balneo-climatotherapy on certain immunologic and hematologic indexes in rheumatism in children. Vopr. pediat. 20 no.2:8-13 Mar-Apr 1952. (GIML 22:1)

1. Of the Children's Division, State Balneological Institute imeni Stalin (Director -- N. I. Nevskiy).

GVANTSBLADZE, V.S.; CHOCHUA, N.Sh.; KARTVELISHVILI, TS.Ye.

Hypertension in children and adolescents [with summary in English].
Pediatrin 36 no.3:17-21 Mr '58. (MIRA 11:3)

1. Iz detskogo otdeleniya Instituta klinicheskoy i eksperimental'noy
kardiologii AN Gruzinskoy SSR (dir.-akad. M.D.TSinamzvarishvili
[deceased])

(HYPERTENSION)

GVANTSELADZE, V.S.; CHOCHUA, N.Sh.

Congenital heart defects. Soob.AN Gruz.SSR 26 no.2:233-240 '61.
(MIRA 14:4)

1. Akademiya nauk Gruzinskoy SSR. Institut klinicheskoy i eksperimental'noy kardiologii im. M.D.Tsinamzgvishvili, Tbilisi.
Predstavleno chlenom-korrespondentom Akademii I.Ya.Tatishvili.
(HEART—ABNORMALITIES AND DEFORMITIES)

GVANTSELADZE, V.S.; DZHAVAKHISHVILI, I.V., prof., red.; YANKOSHVILI,
TS.A., red. izd-va; BOKERIYA, E.B., tekhn. red.

[Reactivity of the child's body in rheumatism] O reaktivnosti
detskogo organizma pri revmatizme. Red. I.V.Dzhavakhishvili.
Tbilisi, Izd-vo Akad. nauk Gruzinskoj SSR, 1962. 125 p.
(MIRA 16:1)

(RHEUMATIC HEART DISEASE)

GVANTSELABER, Valentina Sergeevna; KIKELADZE, Zheva roz'mich;
CHIBURIDZE, Irakliy Tejmaravovich

[Congenital heart defects; clinical aspects, diagnosis
and surgical treatment] Vrozhdennye poroki serdtsa; kli-
nika, diagnostika i khirurgicheskoe lechenie. Tbilisi,
Izd-vo AN Gruz.SSR, 1963. 114 p. [In Georgian]

(MIRA 17:6)

GVANTSELADZE, V.S.; CHOCHUA, N.Sh.; BABUADZE, I.I.; DARIALASHVILI, A.A.

Determination of the activity of the rheumatic process. Study
Inst. klin. i eksper. kard. AN Gruz. SSR 8:467-473 '63.
(MIRA 17:7)

1. Institut kardiologii AN GruzSSR, Tbilisi.

KUPERMAN, G.M.; GVARAMADZE, D.Kh.; DZHIKIYA, S.I.; ZARKUA, N.P.

Obtaining soda from mirabilite and barite of Georgian
deposits. Trudy Inst. khim. AN Gruz.SSR 11:117-125
'53.

(MLRA 10:2)

(Sodium sulfate) (Mirabilite) (Barite)

124-57-1-776

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 103 (USSR)

AUTHOR: Gvaramadze, I.D.

TITLE: How to Calculate the Water Losses Due to Infiltration From a Temporary Irrigation Network (K voprosu metodiki rascheta poter' vody na infil'tratsiyu iz vremennoy orositel'noy seti)

PERIODICAL: Tr. Gruz. n.-i. in-ta gidrotekhn. i melior., 1955, Nr 3 (16), pp 74-80

ABSTRACT: Bibliographic entry

1. Irrigation systems--Performance--Bibliography

Card 1/1

GVARAMADZE, I.D.

Long-range sectoral sprinkler. Trudy GruzNIIGIM no. 20:121-124
'58. (MIRA 15:5)

(Sprinklers)

GVARAMADZE, I.D.

Static control of the head in a self-pressuring sprinkler system.
Trudy Gruz NIIGiM no.21:267-270 '60. (MIRA 16:1)
(Georgia--Sprinkler irrigation)

DZHANDZHGAVA, Sh.G.; GVARAMADZE, L.L.; GUGUNISHVILI, G.I.

Intensification of the performance of diesel locomotive
coolers by means of wetting the cooled surface with water.
Trudy GPI [Gruz.] no.7:39-45 '63.

(MIRA 18:6)

Gvishvildze, N. A.

Dissertation: "Obtaining alloys of manganese-Copper and manganese-Zinc by electrolysis of molten raw materials." Uchi Tsch'opi, Georgian Polytechnic Institute, Tbilisi, 1953. (Referativnyy Zhurnal-Khimiya, No 9, 1953, No 5.)

OO: SUM 311, 23 Dec 1954

AGLADZE, R.I.; MOKHOV, V.M.; TOPCHIASHVILI, L.I.; GVARAMADZE, N.D.; TAVADZE,
F.N., redaktor; NINUA, K.V., tekhnicheskiy redaktor.

[Alloys of manganese with copper, nickel and zinc; a collection of
papers] Splavy margantsa s med'iu, nikelom i tsinkom; sbernik rabot.
Tbilisi, Izd-vo Akademii nauk Gruzinskei SSR, 1954. 121 p. (MLRA 9:5)
(Manganese alloys)

IVANITSKIY, T.V.; GVARAMADZE, N.D.

Thallium content of iron disulfides from the Tkhmorskoye ore
aggregates. Soob. AN Gruz. SSR 19 no.6:701-708 D '57. (MIRA 11:6)

1. Geologicheskii institut AN GruzSSR. Predstavleno akademikom A.I.
Dzhanelidze.

(Georgia--Iron sulfides) (Thallium)

IVANITSKIY, T.V.; GVARAMADZE, N.D.

Concentration and distribution of some rare elements in principal sulfides of lead-zinc and polymetallic ore deposits of Georgia. Geokhimiia no.2:139-148 '60. (MIRA 13:6)

1. The Geological Institute of the Academy of Sciences Georgian SSR.
(Georgia--Metals, Rare and minor)
(Sulfides)

GVARAMADZE, N.D.

Spectral determination of tellurium in pyrites and chalcopyrites
from copper sulfide ores of southeastern Georgia. Soob. AN Gruz.
SSR 26 no.5:555-556 My '61. (MIRA 14:8)

1. Geologicheskii institut AN GruzSSR, Tbilisi. Predstavleno
chlenom-korrespondentom AN GruzSSR P.D.Gamkrelidze.
(Marneuli region--Pyrites) (Tellurium--Spectra)

GVARAMADZE, Ye. Ya.

"Onekotorykh spetsificheskikh osobennostyakh gruzinskogo narodnogo tantsa."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences,
Moscow, 3-10 Aug 64.

GVARDIAN, V.A., inzh.; BUYNITSKIY, Ye.A.

Machines for cleaning drainage trenches. Stroi. i dor. mash.
10 no.3:10-12 Mr '65. (MIRA 18:5)

VARGA, Yemerikh Lyudvigovich [Varha, B.], zvenevoj; GVARDIONOV, B.
[Hvardionov, B.], red.; LUCHKIV, M., tekhn. red.

[Golden grains] Zoloti zerna. Uzhhorod, Zakarpats'ke oblasne
knyzhkovo gazetne vyd-vo, 1961. 19 p. (MIRA 15:4)

1. Kolkhoz imeni Stalina, Khustskogo rayona, Zakarpatskey oblasti
(for Varga).

(Khust District--Corn (Maize))

MARKUSH, Ivan Vasil'yevich; BUGAYENKO, P. [Buhaienko, P.], spets. red.;
GWARDIONOV, B. [Hvardionov, B.], red.; LUCHKIV, M., tekhn. red.

[Treasure of the Borzhava Valley; we shall grow 60 centners of
corn per hectare on 2600 hectares] Skarb Borzhavs'koi dolyny;
vyrostymo po 60 tsentneriv kukurudzi z hektara na ploschi
2600 hektariv. Uzhhorod, Zakarpats'ke oblasne kryzhkovo-
gazetne vyd-vo, 1961. 19 p. (MIRA 15:7)

1. Sekretar' Irshavskogo rayonnoho komiteta Kommunisticheskoy
partii Ukrainy (for Markush).

(Borzhava Valley—Corn (Maize))

GVARDIONOV, B.O. [Hvardionov, B.O.], red.; IVANOV, S.D., red.;
LUCHKIV, M.R., tekhn. red.

[Hold high the honor of the grain grower] Dorozhit'
chestiu khliborova. Uzhhorod, Zakarpats'ke obl. knyshkovo-
gazetne vyd-vo, 1962. 125 p. (MIRA 16:5)
(Agricultural workers)

SUKHAN, Yu.; SOVA, P.P., spets. red.; GWARDIONOV, B.O., red.

Znaiomtes' - Svaliava! Get acquainted with Svaliava!
Uzhhorod, Zakarpats'ke obl. knyzhkovo-gazetne vyd-vo,
1964. 46 p. (MIRA 18:5)

GVARDTSITELI, I.M.; FIDLER, Kh.N.

Use of tung-oil cake in the manufacture of resins and plastics. Plast.
massy no.11:14-17 '60. (MIRA 13:12)
(Tung oil) (Plastics)

GVARDTSITELI, I.M.; CHERKEZISHVILI, K.I.; PETROV, A.D.

Action of triethylsilane on acetylenic α -glycols in the presence
of Pt/C and H_2PtCl_6 . Dokl. AN SSSR 136 no.4:817-820 F '61.

(MIRA 14:1)

1. Tbilisskiy gosudarstvennyy universitet imeni I.V. Stalina.
2. Chlen-korrespondent AN SSSR (for Petrov).
(Silane) (Glycols)

GVARDZHALADZE, L.T.; SHEBES, M.R., dots., otv. red.; DOLENKO,
L.N., red.

[Theoretical principles of electrical engineering
(Chapter: Electrical networks with ferromagnetic cores)]
Teoreticheskie osnovy elektrotehniki (Glava: Elektricheskie tsepi s ferromagnitnymi serdechnikami); uchebnoe posobie dlia studentov ~~tehnicheskikh~~ fakul'tetov VZEIS. Moskva, Redaktsionnoizdatel'skii otdel VZEIS, 1963. 65 p.
(MIRA 17:1)

(Electric networks)

GVARISHVILI, R. I.

Oxidative and glycolytic phosphorylation of the myocardium
in experimental E-vitaminosis. Trudy Inst. klin. i eksper.
kard. AN Gruz. SSR 8: 321-325 1965. (MIRA 1966)

1. Institut kardiologii AN GruzSSR, Tbilisi.

GVASAKHARIYA, V.K.

Effect of the basin slope on the normal annual streamflow of
mountain rivers. Meteor. i gidrol. no.12:23-25 D '60. (MIRA 13:11)
(Rivers)

GVASALIYA, A.N.

Vitaminization of fodder yeasts. *Gidroliz.i lesokhim.prom.* 15
no.3:6-7 '62. (MIRA 15:5)

1. Ingurskiy sul'fitno-drozhzhevoy zavod.
(Yeast as feeding stuff) (Vitamins)

NIKOLAYEV, V.; KROSHNEV, A. (Temir-Tau); VLDOV, P., inzh. (Ostrogozhsk, Voronezhskoy obl.); BOGDANOV, A. (Arkhangel'skaya obl.); ZHEMOCHKIN, G.; RENKOV, V. (Riga); KALININ, V. (Riga); GVASALIYA, Sh.; DIDIK, A. (Lakhdenpokh'ya, Karel'skoy ASSR); SINEL'NIKOV, A.

Advice of specialists. Za rul. 20 no.12:20-21 D '62. (MIRA 15:12)
(Motor vehicles)

GVATUA, N.A.

Low oxygen-content air-mixture technique for the electrocardiographic detection of coronary insufficiency. Terap. arkh. 27 no.7:34-40 '55. (MIRA 9:1)

1. Iz fakul'tetskoy terapevticheskoy kliniki (dir.--deystvitel'ny chlen AMN SSSR prof. V.N. Vinogradov) I Moskovskogo ordena Lenina meditsinskogo instituta.

(CORONARY, DISEASE, diagnosis,

EKG with inspiration of oxygen-poor mixture)

(ELECTROCARDIOGRAPHY, in various diseases,

coronary insuff., with inspiration of oxygen-poor mixture)

(ANOXIA,

inspiration of oxygen-poor mixture with EKG in diag. of latent coronary insuff.)

GVATUA, N. A., Cand Med Sci -- (diss) "Certain Clinico-Anatomical Peculiarities of Recurrent Infarcts of the Myocardium." Mos, 1957.
14 pp (1st Mos Order of Lenin Medical Inst Im I. M. Sechenov),
200 copies (KL, 48-57, 109)

- 67 -

POPOV, V.G.; GVATUA, N.A.

Some peculiarities of clinicoanatomical and electrocardiographic changes in recurrent myocardial infarcts. Terap.arkh. 29 no.3: 51-58 Mr '57. (MLRA 10:8)

1. Iz fakul'tetskoy terapevticheskoy kliniki (dir. - deyatvital'nyy chlen AMN SSSR prof. V.M.Vinogradov) i kafedry patologicheskoy anatomii (sav. - chlen-korrespondent AMN SSSR prof. A.I.Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova (MYOCARDIAL INFARCTION, recur., ECG & clinico-anat. aspects (Rus))

GVATIYA, N.A.

Recurrent course of myocardial infarct. Terap. arkh. 29 no.8:17-24
'57. (MIRA 11:4)

1. Iz fakul'tetskoy terapevticheskoy kliniki (dir.-deystvitel'nyy
chlen AMN SSSR prof. V.N.Vinogradov) i kafedry patologicheskoy anatomii
(zav. kafedroy-chlen-korrespondent AMN SSSR prof. A.I.Strukov) I
Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(MYOCARDIAL INFARCT.
recur. (Rus)

GVATUA, N.A.; DEMIDYUK, P.F.; LESHCHENKO, A.I. (Kiyev)

Vectorcardiogram in myocardial hypertrophy of the right ventricle.
Vrach. delo no.1:31-37 Ja '62. (Ara 15:2)

1. Otdel klinicheskoy revmatologii (zav. - prof. A.L.Pkhakadze)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy
meditsiny imeni akademika N.D.Strazhesko.
(VECTORCARDIOGRAPHY) (HEART__MUSCLE__DISEASES)

MIKHNEV, A.L., zasluzhennyy deyatel' nauki, prof.; GVATUA, N.A., kand.
med.nauk

Hemodynamic changes in acute myocardial infarction. Vrach delo
no.4: 3-10 Ap'63. (MIRA 16:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut klinicheskoy
meditsiny imeni akademika N.D.Strazhesko i kafedra gospital'noy
terapii (zar. - prof. A.A. Ayzenberg) Kiyevskogo meditsinskogo
instituta.

(HEART--INFARCTION)
(BLOOD--CIRCULATION, DISORDERS OF)

GVARAMIYA, M.P., kand.tekhn.nauk

Preservation of tea leaves in low temperatures. Trudy VNIICHP
no.1:15-33 '58. (MIRA 12:5)
(Tea--Preservation)

88405

S/020/61/136/004/013/026
B016/B075

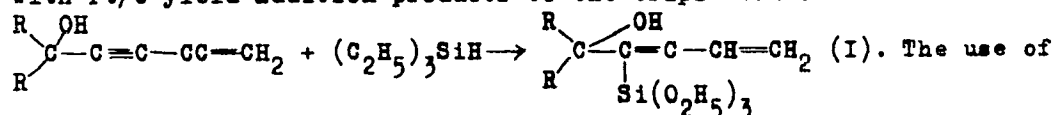
5-3700

AUTHORS: Gvardtsiteli, I. M., Cherkeshishvili, K. I., and Petrov, A.D.,
Corresponding Member AS USSR

TITLE: The Action of Triethyl Silane on Acetylene- γ -glycols in the
Presence of Pt/C and H_2PtCl_6

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 4,
pp. 817 - 820

TEXT: The authors discuss the reaction formulas (I)-(VI) observed in the
reaction of triethyl silane with secondary and tertiary vinyl ethynyl
carbinols (Refs.1,2) in the presence of Pt/C and 0.1 M $H_2PtCl_6 \cdot 6H_2O$ in
isopropyl alcohol. They found that secondary as well as tertiary carbinols
with Pt/C yield addition products to the triple bond:



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The Action of Triethyl Silane on Acetylene- γ -glycols in the Presence of Pt/C and H_2PtCl_6 S/020/61/136/004/013/026
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$H_2PtCl_6 \cdot 6H_2O$ proved that triethylsilane is added to tertiary vinyl ethyl carbinols according to reaction (I), while the secondary vinyl ethyl carbinols lead to the formation of organosilicon ethers:

$RCHOH-C\equiv C-CH=CH_2 + (C_2H_5)_3SiH \rightarrow RCH-C\equiv C-CH-CH_2$ (II). Apart from

the nature of alcohol, also the amount of the catalyst determined the course of reactions (I) and (II). Thus, with a 2-ml catalyst the reaction with n-propyl vinylethyl carbinol proceeds according to (II), with 1 ml, however, simultaneously according to (I) and (II). Continuing these studies, the authors investigated the reaction between primary (butinediol) (1) and secondary (dimethyl butinediol) acetylene- γ -glycols with triethyl silane (2). Tetramethyl butinediol (3) and symmetric dimethyl diethyl butinediol (4) were used as tertiary glycols. All reactions proceeded in isopropyl alcohol. To 1): With H_2PtCl_6 the reaction proceeded according to (III) (see below). To 2): With H_2PtCl_6 a product of simultaneous addition to the triple bond and to the hydroxyl is formed. For comparing the reaction products of primary and secondary glycols with

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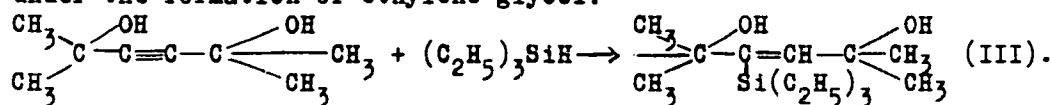
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The Action of Triethyl Silane on Acetylene- γ -glycols in the Presence of Pt/C and H_2PtCl_6 S/020/61/136/004/013/026 B016/B075

triethyl silane, the authors have synthesized mono- and diethers of these glycols from triethyl chlorosilane. Thus, in both cases only diether

$C \equiv C - CH - R$ forms according to reaction (V), where $R = H$ and CH_3 . These

ethers agreed with none of the reaction products of corresponding glycols with triethyl silane. To 3): When using Pt/C, triethyl silane was added under the formation of ethylene glycol:



With the use of H_2PtCl_6 , the reaction according to (III) proceeded more easily and with higher yields than with Pt/C. To 4): The use of Pt/C caused no reaction. The reaction with H_2PtCl_6 , however, proceeds according to (III), its yield amounting to 36% of the theoretical one. The organo-silicon ethylene glycols produced were dehydrated in the same way with $KHSO_4$ and yielded furane compounds. There are 2 Soviet references.

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The Action of Triethyl Silane on Acetylene- γ -glycols in the Presence of Pt/C and H_2PtCl_6 S/020/61/136/004/013/026
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(Tbilisi State University imeni I. V. Stalin)

SUBMITTED: November 2, 1960

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