

YENALIYEV, F.S.

Modification of Hess' operation in ptosis of the eyelids. Vest.
oft. 73 no. 1:35-36 Ja-F '60. (MIRA 14:1)
(EYELIDS—SURGERY)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630010-3

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630010-3"

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NO REF SOV: 004

OTHER: 004

PETRASHEN', G.I.; YENAL'SKIY, V.A.

Some interference phenomena in media containing thin horizontal-parallel layers. Part 1. Izv.AN SSSR. Ser.geofis. no.9:1009-1020 (MIRA 9:12)
S '56.

1. Akademiya nauk SSSR, Leningradskoye otdeleniye Matematicheskogo instituta imeni V.A. Steklova.
(Seismic waves)

PETRASHEN', G.I.; YENAL'SKIY, V.A.

Some interference phenomena in media containing thin horizontal parallel layers. Part 2. Izv. AN SSSR. Ser. geofiz. no. 10:1129-1144
0 '56. (MIRA 10:1)

1. Akademiya nauk SSSR Leningradskoye otdeleniye Matematicheskogo instituta imeni V.A. Steklova.
(Seismic waves)

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PETRASHEN', G.I.; YENAL'SKIY, V.A.

Some interference phenomena in media containing thin horizontal-parallel layers. Part 3. Izv.AN SSSR.Ser.geofiz. no.11:1241-1251 N '56. (MIRA 10:1)

1. Akademiya nauk SSSR.Leningradskoye otdeleniye Matematicheskogo instituta imeni V.A. Steklova.
(Seismic waves)

YENAL'DIN, V.A. (Moskva); DOBENNIK, V.S. (Moskva)

Nonlinear problem involving the collision of rarefied plasma clouds.
PMF no. 13-13 Ju-E '65. (MIRA 18:8)

ACC NR: AP7004629

SOURCE CODE: UR/0288/66/000/003/0003/0012

AUTHOR: Yenal'skiy, V. A.

ORG: none

TITLE: Numerical solution of the dispersion equation for beam-excited plasma oscillations

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 3, 1966, 3-12

TOPIC TAGS: plasma beam interaction, plasma oscillation, plasma wave propagation, dispersion equation, numerical solution, probability integral

ABSTRACT: A computer program is developed for solving the dispersion equation satisfied by the complex frequency $Z \sim \Omega + i\Gamma$ of longitudinal oscillations in the plasma, for the case in which thermal motion in the plasma and electron beam exhibits Maxwellian distribution. As this equation involves the probability integral of complex argument $w(z)$, the program deals with 1) the computation of $w(z)$ and its first two derivatives, and 2) the solution of the transcendental equation itself. Since classical $w(z)$ programs for the construction of tables are not adequate for all values of z , an additional program is presented which uses a system of analytic series expansions which are given in detail. Programs for the identification of the roots and their precise computation are also given. Typical examples of numerical results

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UDC: 533.9.12

ACC NR: AP7004629

follow in the form of tables and curves giving the frequency Ω and the amplitude increment Γ as functions of the velocity v_0 of the electron beam for particular values of the various physical parameters. The author thanks N. N. Yanenko and V. S. Imshennik for formulating the problem and for their interest in the calculation results. Orig. art. has: 2 figures and 1 table. [WA-71]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001/

Card 2/2

ACC NR: AT7004276

SOURCE CODE: UR/2517/66/074/000/0093/0106

AUTHOR: Yenal'skiy, V. A.

ORG: none

TITLE: On the motion of particles in an electromagnetic field

SOURCE: AN SSSR. Matematicheskiy institut. Trudy, v. 74, 1966. Raznostnyye metody resheniya zadach matematicheskoy fiziki (Difference methods for solving problems in mathematical physics), pt. 1, 93-106

TOPIC TAGS: electromagnetic field, particle motion, elliptic differential equation, iteration, numeric solution

ABSTRACT: The collisionless motion of particles of mass m and charge e in an electromagnetic field in free space is considered. Maxwell's equations with the Lorentz gauge and the equation of motion are reduced to the form (in cylindrical coordinates)

$$\ddot{r} + \alpha \eta z \left(\frac{\partial A_r}{\partial z} - \frac{\partial A_z}{\partial r} \right) = \alpha \left[-\frac{\partial (\bar{\Phi}_0 + \Psi)}{\partial r} + \dot{\varphi} \eta \frac{\partial (r A_\varphi)}{\partial r} \right] + r \dot{\varphi}^2,$$

$$\left[\frac{z \dot{\varphi}}{v \dot{\varphi}} \dot{\varphi} + \frac{z \dot{\varphi}}{(A + \Phi) \dot{\varphi}} \right] \dot{\varphi} = \left(\frac{z \dot{\varphi}}{v \dot{\varphi}} - \frac{z \dot{\varphi}}{v \dot{\varphi}} \right) \dot{\varphi} - z,$$

$$(r^2 \dot{\varphi})' = -\alpha \eta (A_\varphi r),$$

$$\Delta \Phi_0 = 0, \quad \Delta \Psi = -\frac{4\pi p}{\epsilon}, \quad \Delta A_r = \frac{1}{r^2} A_r, \quad \Delta A_\varphi = \frac{1}{r^2} A_\varphi, \quad \Delta A_z = 0.$$

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ACC NR: AT7004276

where

$$ct = t', \quad \alpha = \frac{e}{mc^2}, \quad \frac{dI}{dt} = f.$$

Here the scalar potential

$$\Phi = \bar{\Phi}_0 + \Psi;$$

has been separated into a high frequency component and a low frequency component

$$\bar{\Phi}_0 = \Phi_0 \cos(\omega t + \theta).$$

The motion of particles is considered in a cylindrical region of radius R and length L on whose surface Σ are given the boundary conditions

$$\Phi(r, 0) = \Phi(r, L) = 0,$$

$$\Phi(R, z) = f(z),$$

$$\Psi|_{\Sigma} = 0,$$

$$A_0(r, 0) = A_0(r, L) = 0,$$

$$\left. \frac{1}{r} \frac{\partial}{\partial r} r A_0 \right|_{(R,z)} = H_z(z),$$

where f and H_z are given functions. The methods for numerical solution of the problem are discussed in detail, and the conditions for convergence of the iteration process are described. Some numerical results for several specific examples are presented and in one case are compared with the known analytic solution. The author thanks N. N. Yanenko, V. A. Teplyakov, and V. S. Imshennik for discussions, advice, and interest in the problem. A. A. Nikiforova helped write the computer programs. Orig. art. has: 124 equations, 3 figures, and 1 table.

Card 2/2 SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 003

YENAL'YEV V.D.

USSR/Thermodynamics - Thermochemistry. Equilibria.
Physical-Chemical Analysis. Phase Transitions.

B-8

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18530

Author : A.I. Yurzhenko, V.D. Yenal'yev.

Inst : Lvov University.

Title : Study of Distribution of Isopropylbenzene Hydroperoxide
between Styrene and Water Phases.

Orig Pub : Nauk. zap. L'vivs'k. un-tu, 1955, 34, 45-50

Abstract : The distribution of isopropylbenzene hydroperoxide (I) between the styrene and water phases at 20°, 35° and 43° was studied. The distribution factor (K) describing the ratio of molar parts of I in the water phase and in styrene decreases with the temperature rise from 0.0639 at 20° to 0.0314 at 43°. Addition of small amounts of NaOH (0.001 to 0.025 n.) causes a decrease of K due to salting out, but at the increase of NaOH concentration to 0.1 n., K rises due to the formation of a I salt soluble in water. Addition of Na₂CO₃ and K₂SO₄ causes salting out of I and a decrease of K.

Card 1/1

YENAL'YEV, V.D.
YURZHENKO, A.I.; YENAL'YEV, V.D.

Interaction between organic hydroperoxides and ferrous salts.
Dop. ta pov. L'viv. un. no. 7 pt. 3:195-197 '57. (MIRA 11:2)
(Chemical reaction, Rate of)
(Hydroxides) (Iron salts)

YENAL'YEV, V.D.; KUCHER, R.V.; YURZHENKO, A.I.

Effect of interphase distribution of hydroperoxides on the
rate of certain reactions in emulsions. Dop. ta pov. L'viv un.
no. 7 ~~1981-201-204~~ 157. (MIRA 11:2)
(Hydroxides) (Chemical reaction, Rate of)
(Emulsions)

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CIA-RDP86-00513R001962630010-3"

YURZHENKO, A.I. [IUrshenko, O.I.]; YENAL'YEV, V.D. [IEnal'iev, V.D.]

Investigation of the reactions of organic hydroperoxides with
salts of ferrous oxide. Nauk.zap.L'viv.un 46:7-12 '58.
(MIRA 12:7)

(Hydroperoxides) (Iron salts)

KUCHER, R.V.; ~~YENAL'YEV, V.D.~~ [Yenal'iev, V.D.]; YURZHENKO, A.I.,
[IUrshenko, O.I.], Kovbuz, M.O.

Effect of the molecular weight of tertiary hydrocarbons on
their oxidizability in the liquid phase and in emulsions. Nauk.
zap.L'viv.un. 46:13-16 '58. (MIRA 12:7)
(Hydrocarbons) (Oxidation)

YENAL'YEV, V.D. [IEnal'iev, V.D.]; YURZHENKO, A.I. [IUrzhenko, O.I.]

Effect of the relationship of phase to the kinetics of redox
polymerization in emulsions. Nauk.zap.L'viv.un. 46:21-25 '58.
(MIRA 12:7)

(Polymerization)

YENAL'YEV, V.D. [IEnal'iev, V.D.]; YURZHENKO, A.I. [IUrzhenko, O.I.]

Effect of the concentration of the initiating system on the kinetics
of redox polymerization in emulsions. Nauk.zap.L'viv.un 46:
26-33 '58. (MIRA 12:7)

(Polymerization)

5(4)

AUTHORS:

Yurzhenko, A. I., Ivanova, N. Ya.,
Yenal'yev, V. D.

SOV/20-123-2-32/50

TITLE:

The Participation of the Emulsifier in the Oxidation Reduction
Initiation of Emulsion Polymerization (Uchastiye emul'gatora v
okislitel'no-vosstanovitel'nom initsirovani emul'sionnoy
polimerizatsii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 324-326
(USSR)

ABSTRACT:

One of the most important factors influencing the kinetics of
polymerization in emulsions is the nature of the emulsifying
agent. The nature of the emulsifier used influences not only
the velocity of the polymerization process but also the
properties of the polymer formed. When investigating emulsion
polymerization in the presence of various emulsifiers, the
authors noticed several particularities in the development of
the polymerization process in connection with the application
of cetyl pyridine bromide. In this case the part of the emul-
sifier is played not only by a purely colloidochemical factor.
Investigation was carried out by the dilatometric method in a
dilatometer which prevents contact between the polymerization

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The Participation of the Emulsifier in the Oxidation SOV/20-123-2-32/50
Reduction Initiation of Emulsion Polymerization

system and air. In the case of all experiments, the ratio between the hydrocarbon- and the aqueous—phase was 1 : 9. The hydroperoxide of isopropyl benzene served as initiator, and styrene was used as monomer. Polymerization kinetics was investigated at various temperatures. In the course of one of the test series sodium carbonate was introduced into the aqueous phase. The results obtained by the experiments are shown in a diagram. Conditions otherwise being equal, polymerization develops much more rapidly than if other classes of emulsifiers are used. Cetyl pyridine bromide warrants sufficiently rapid polymerization also at low temperatures (4 and 18°), which is not the case with other emulsifiers. If sodium carbonate is present in the aqueous phase, polymerization velocity passes through a maximum at increased temperatures. In the course of experiments carried out without sodium carbonate, polymerization increases with rising temperature, in which case linear dependence is conserved up to a rather high degree of polymerization. An addition of sodium carbonate and an increase of temperature acts in the same direction (increase of polymerization velocity). The velocity

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The Participation of the Emulsifier in the Oxidation SOV/20-123-2-32/50
Reduction Initiation of Emulsion Polymerization

of the polymerization process is due to the velocity of initiation. The decay of isopropyl benzene hydroperoxide in an aqueous solution is considerably accelerated by the introduction of cetyl pyridine bromide also if Na_2CO_3 is lacking.

This decay is still more accelerated if cetyl pyridine bromide and sodium carbonate are present at the same time. Data concerning the kinetics of this decay at various conditions are given by a diagram. An increase of temperature increases the initial velocity of polymerization and reduces the final yield of the polymer. Also an addition of sodium carbonate produces the same effect. A comparison between these and other data makes it possible to draw the following conclusion: The surface-active emulsifier may play a double rôle in emulsion polymerization: Firstly, it may act as an ordinary emulsifier stabilizing the original emulsion of the monomer, and, secondly, the emulsifier may have the functions of a polymerization activator by causing an induced decay of the hydroperoxide. There are 4 figures and 7 references, 4 of which are Soviet.

Card 3/4

The Participation of the Emulsifier in the Oxidation SOV/20-123-2-32/50
Reduction Initiation of Emulsion Polymerization

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Ivana Franko
 (L'vov State University imeni Ivan Franko)

PRESENTED: July 3, 1958, by P. A. Rebinder, Academician

SUBMITTED: May 16, 1958

Card 4/4

YENAL'YEV, V.D.; KAZ'MIN, S.D.; KUCHER, R.V.

Initiation of the emulsion oxidation of isopropylbenzene and 1, 1-diphenylethane by hydrogen peroxide. Sbor. nauch. rab. Inst. fiz. i org. khim. AN BSSR no.8:126-131 '60. (MIRA 14:3)

1. L'vovskiy gosudarstvennyy universitet im. I. Franko.
(Cumene) (Ethane) (Hydrogen peroxide)

28291
S/076/61/035/010/010/015
B106/B230

54300 also 1375
AUTHORS:

Kucher, R. V., Kaz'min, S. D., and Yenal'yev, V. D.

TITLE:

Initiation of emulsion oxidation of alkylated aromatic hydrocarbons by hydrogen peroxide

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 10, 1961, 2322 - 2327

TEXT: The authors investigated the initiation by hydrogen peroxide in emulsion oxidation of isopropyl benzene, 1,1 diphenyl ethane, and 1-phenyl-1-p-tolyl ethane in the liquid phase, this problem being of great practical interest in the synthesis of hydroperoxide compounds. Oxidation was conducted at 85°C in "air lift" type glass vessels in which the reaction mixture was agitated by air bubbling in through a porous glass partition. For the aqueous phase, a 0.1 N soda solution was used in all tests. The volume ratio of the hydrocarbon phase to the aqueous phase was 1:3. At regular intervals, samples were taken and the hydroperoxide content was determined iodometrically by potentiometric titration (Ref. 5: see below). Oxidation of the alkylated aromatic hydrocarbons referred to proceeds in emulsion systems by autocatalysis. The effect of hydrogen

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Initiation of emulsion oxidation of ...

peroxide on the process is very specific, and depends not merely on the character of the hydrocarbon but also, in a high degree, on the instant of adding the hydrogen peroxide. Constant initiation by adding hydrogen peroxide at short intervals intensifies the oxidation of 1,1-diphenyl ethane, whereas it inhibits the oxidation of cumene. In all oxidation processes investigated, the following common rules could be observed: when hydrogen peroxide was added at the beginning of the process, reaction rate and hydroperoxide yield were practically not affected; when, however, hydrogen peroxide was added at the final stage of oxidation after maximum concentration of hydroperoxide was attained, a rapid rise in reaction rate and hydroperoxide yield took place anew. From observations made the following conclusions were drawn: Initiation by hydrogen peroxide did not simply cause a rise in the concentration of chain radicals as had been frequently assumed in publications. Apparently, radicals formed by decomposition of H_2O_2 were not sufficiently active to start new chains by reacting with the hydrocarbon. With progressing oxidation, products accumulated in the system acting as inhibitors on oxidation. With such inhibitors initiator radicals may react, thus eliminating the inhibiting effect. For this reason, initiation effect increases with

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S/076/61/035/010/010/015
B106/B230

Initiation of emulsion oxidation of ...

progressing reaction. This hypothesis was confirmed by an experiment in which hydrogen peroxide was introduced into a reaction retarded by an inhibitor. For this purpose, the oxidation of cumene was inhibited by adding a small quantity (0.01 g-mole/liter) of phenol breaking down the oxidation chains according to reaction $C_6H_5OH + R' \rightarrow C_6H_5O' + RH$. The C_6H_5O' radicals are of low activity, and recombine. Adding hydrogen

peroxide eliminated the inhibition of the reaction, and caused a steep rise of the oxidation rate. When during the reaction, oxidation products combine with initiator radicals to form radicals similar to chain radicals in their activity, initiation results in increasing the total oxidation rate. In the reverse case, the consumption of components reacting with initiator radicals is accelerated and the total reaction rate decreases. Also in this case, the effect of a brief initiation at the final stage of oxidation may be favorable for the process. The effect of an initiator therefore depends on the reactivity of the components of the reaction mixture. There are 3 figures and 7 references: 5 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Ref. 5: V. Kokatnur, M. Jelling, J. Amer. Chem. Soc., 63,
Card 3/4

✓

Initiation of emulsion oxidation of ... ²⁸²⁹¹
S/076/61/035/010/010/015
B106/B230

1432, 1941; J. W. Fordham, H. L. Williams, Canad. J. Chem., 27B, 913,
1954.

ASSOCIATION: L'vovskiy universitet im. Iv. Franko (L'vov University imeni
Iv. Franko)

SUBMITTED: March 3, 1960

W

Card 4/4

81410

S/020/60/132/06/35/068
B004/B005

5.3200

AUTHORS:

Kucher, R. V., Kaz'min, S. D., Yenal'yev, V. D.

TITLE:

On the Possibility of Increasing the Yield in Hydroperoxide
by Initiating the Cumene Oxidation With Hydrogen Peroxide ||

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6,
pp. 1348-1351

TEXT: The authors discuss the process of initiation of a chain reaction
on the basis of papers by N. M. Emanuel' (Ref. 1) and N. N. Semenov (Ref.2).
In previous papers by the authors (Refs. 3, 4) it was observed that in
the case of initiation of oxidation of isopropyl benzene by means of
 H_2O_2 the effect depends on the point of time of adding the initiator
(Fig. 1A). An addition at the beginning of oxidation effects neither
acceleration of the reaction nor reduction of the induction period.
Only if H_2O_2 is added at later points of time when the reaction becomes
slower, it effects an acceleration so that the hydroperoxide yield rises

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On the Possibility of Increasing the Yield
in Hydroperoxide by Initiating the Cumene
Oxidation With Hydrogen Peroxide

S/020/60/132/06/35/068
B004/B005

from 40 to 80%. Hence, the authors conclude that the by-products develop-
ing during oxidation exert an inhibiting influence which is eliminated
by H_2O_2 . They confirmed this conclusion by adding phenol as an inhibitor
the effect of which was really eliminated by H_2O_2 (Fig. 1B). Equations
are written down for the kinetics of the reaction $A \rightarrow B \rightarrow C$, with the
product B undergoing degenerated branching, and C interrupting the reaction
chain; Fig. 2 shows the function $\eta = f(\tau)$ for various values of β
($\eta = B/A$, $\tau = A\sqrt{h/g}$, h - rate constant of degenerated branching, g - rate
constant of the interruption of reaction, $\beta = k_3\sqrt{A/hg}$, k_3 - constant of
the reaction rate for C). The later the H_2O_2 is added, the more intensive
is its initiating effect. There are 2 figures and 6 references: 5 Soviet
and 1 Swedish.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Ivana Franko
(L'vov State University imeni Ivan Franko)

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81410

On the Possibility of Increasing the Yield
in Hydroperoxide by Initiating the Cumene
Oxidation With Hydrogen Peroxide

S/020/60/132/06/35/068
B004/B005

X

PRESENTED: February 11, 1960, by V. N. Kondrat'yev, Academician

SUBMITTED: February 9, 1960

Card 3/3

YENAL'YEV, V.D. [IEnal'iev, V.D.]; ZAYTSEVA, V.V.; SADOVSKIY, Yu.S.
[Sadovs'kyi, I.U.S.]; BATOG, A.Ye. [Batoch, A.IE.]; SADOVSKAYA, T.M.
[Sadovs'ka, T.M.]

Thermal stability and initiating activity of substituted benzoyl
peroxide. Khim.prom. [Ukr.] no.1:17-20 Ja-Mr '64. (MIRA 17:3)

BATOG, A.Ye.; SOROKINA, A.N.; YENAL'YEV, V.D.; ROMANTSEVICH, N.E.

Synthesis of some tert-amyloperacylates. Ukr. khim. zhur. 39
no.9:954-955 '64. (MIRA 17:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh
mass, Donetsk.

NAZAROVA, Z.F.; BATOG, A.Ye.; YENAL'YEV, V.D.; ROMANTSEVICH, M.K.

Condensation of tertiary amyl hydroperoxide with some
carbonyl compounds. Zhur. ob. khim. 34 no.7:2430-2432
Jl '64 (MIRA 17:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut plastmass,
Donetsk.

BATOG, A.Ye.; TATARSKAYA, I.M.; BOCHAROVA, Yu.Ye.; YENAL'YEV, V.D.;
ROMANTSEVICH, M.K.

Synthesis of peroxide and hydroperoxida of tertiary butyl.
Ukr.khim.zhuz. 31 no.2:207-208 '65. (MIRA 18:4)

3. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh
mass, Donetsk.

YENAL'YEV, V.D.; KONDRATOVICH, A.A.; GENDRIKOV, E.P.; DEDOVETS, G.S.

Swelling of the copolymer of styrene with divinyl benzene.
Plast. massy no.8:5-6 '65. (MIRA 18:9)

YENAI'YEV, V.D.; ZAYTSEVA, V.V.; SADOVSKIY, Yu.S.; SADOVSKAYA, T.N.;
SOROKINA, A.N.

Kinetics of styrene polymerization in the presence of some tert-amyl
peracylates. Ukr. khim. zhur. 31 no.8:834-838 '65. (MIRA 18:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh mass.

YEMAL'YEV, V.D.; ZAYTSEVA, V.V.; SABOVSKIY, Yu.S.; SABOVSKAYA, T.H.;
NAZAROVA, Z.F.

Polymerization of styrene initiated by bifunctional peroxides.
Vysokom. soed. 7 no.2:275-279 P '65. (MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh
mass.

ACC NR: AP6017975

SOURCE CODE: UR/0413/66/000/010/0079/0079

INVENTORS: Yonal'yev, V. D.; Domidenko, A. G.

ORG: none

TITLE: A method for obtaining granular polymers. Class 39, No. 181807 [announced by Ukrainian Scientific Research Institute of Plastics (Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh mass)]

SOURCE: Izobretoniya, promyshlennyye obraztsey, tovarnyye znaki, no. 10, 1966, 79

TOPIC TAGS: polymer, polycondensation, plastic, formaldehyde, phenol, alumosilicate, silica gel

ABSTRACT: This Author Certificate presents a method for obtaining granular polymers. The method involves suspensional polycondensation of one or several mixed polar substances that enter the polycondensation reaction and form oil-insoluble products, such as phenolsulfo acids and formaldehyde, in a nonpolar dispersing medium. To strengthen the stability of the emulsion, structuring substances are added to the dispersing medium. These substances possess hydrophylic-hydrophobic properties or are capable of assuming hydrophylic-hydrophobic properties due to an addition of hydrophobizing or hydrophylizing addenda, for instance alumosilicates, silica gel or organic salts of heavy metals.

SUB CODE: 11/ SUBM DATE: 14Jan63

Card 1/1

UDC: 678.6.034

COUNTRY : Bulgaria D
CATEGORY :
ABD. JOUR. : RZKhim., No. 1959, No. 25698
AUTHOR : Yanchev, D.; Stancheva, P.
INST. : Higher Agricultural Institute "V. Kolarov".
TITLE : Chemical Characterization of Manganese Ore
from the "Potoda" Mine.
ORIG. PUB. : Nauchi tr. Vissh. sel'skoston. in-t "V. Kola-
rov" - Plovdiv, 1956 (1958), 5, 189-195
ABSTRACT : Samples of ore were investigated in order
to develop the technology of its industrial utilization.
Determinations were made of variations of basic composition,
proportions of oxides and compounds of Mn of different
valency, and a procedure is proposed for the production of
potassium permanganate. -- G. Vorob'yev.

CARD:

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Ya.; DZHELEPOV, B. S.; YENCHEV, D. A.; ZHELEV, Zh. T.; KALINNIKOV, V. G.;
KURAVTSEVA, A. V.

"Investigations of Spectra of Conversion Electrons and Spectra of Positrons
of the Europium Fraction."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

OIYaI, LGU (Joint Inst Nuclear Res; Leningrad State Univ)

L 51469-65 EWT(m) Feb ULAAP

WT/0267/62/001/001/0562/0572

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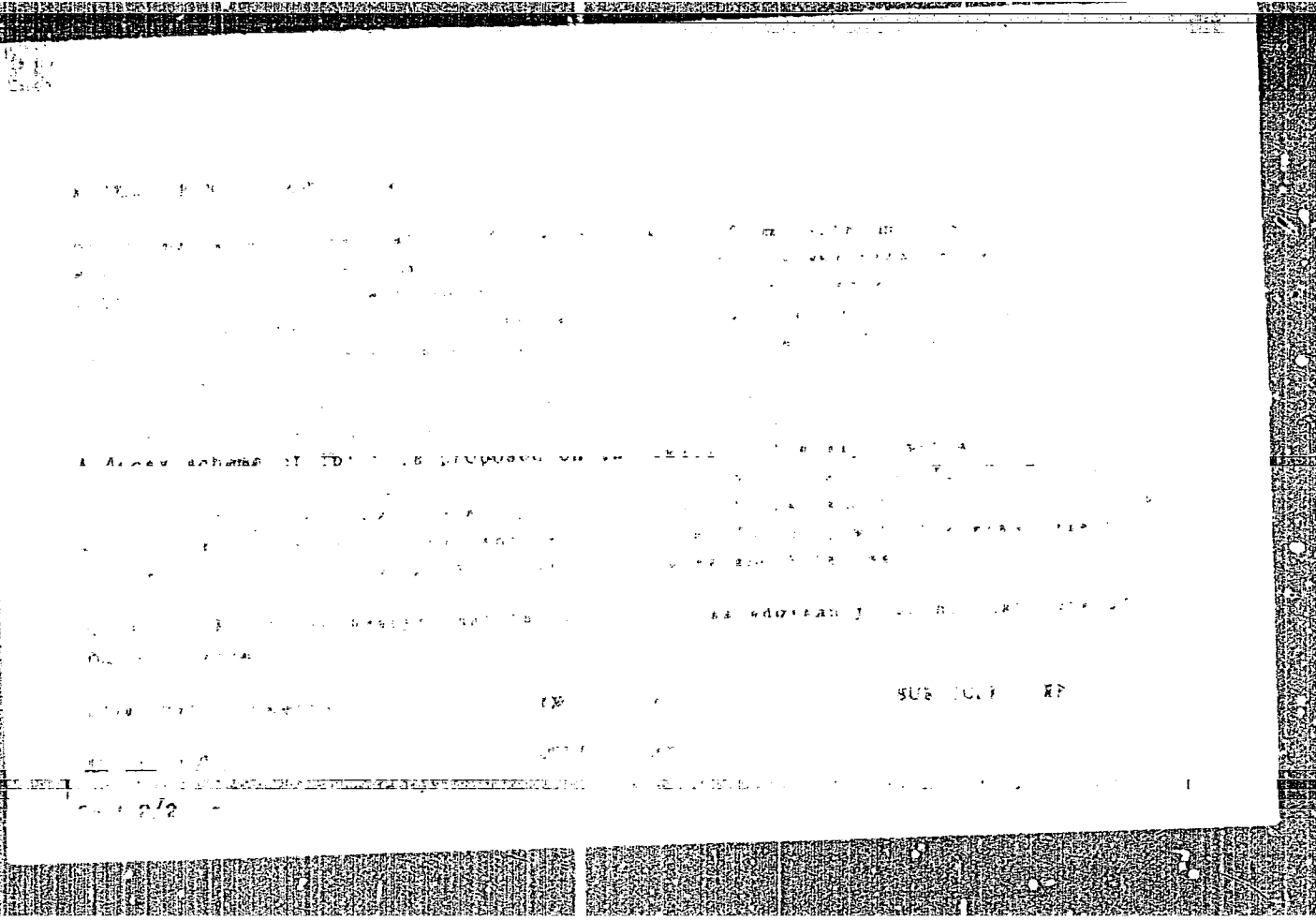
A. M. L. ... I. B. ... I. A. ... L. V. ...

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... .. coincidence spectrum, positron spectrum, level scheme

... .. investigations of the conversion electron ...
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10th Annual Conference on Nuclear Spectroscopy, ...
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S/078/60/005/06/07/030
B004/B0145.2600
5.4130
AUTHOR:

Yanchev, D. G.

TITLE:

The Influence of Some ¹Ammonium⁻, ¹Potassium⁻, and ¹Sodium
Salts Upon the Decomposition Rate of Ammonium Nitrite in
the Reaction $\text{NH}_4\text{Cl} + \text{NaNO}_2 \rightleftharpoons \text{NH}_4\text{NO}_2 + \text{NaCl}$ PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 6,
pp. 1234 - 1240

TEXT: The author investigated the influence of NH_4^- , K^- , and Na salts of various anions, namely, ClS^- , Br^- , NO_3^- , Cl^- , CH_3COO^- , and SO_4^{2-} upon the decomposition of ammonium nitrite. He describes the experimental arrangement (Fig. 1), in which the temperature was rigorously kept constant, and the amount of nitrogen liberated was measured every 7 sec. Experimental results are graphically shown in Figs. 2-4 (abscissa - duration of the experiment, ordinate - liberated N_2 in cm^3). The separation of N_2 in the reaction of ammonium chloride with sodium nitrite attains

Card 1/4

The Influence of Some Ammonium-, Potassium-, and Sodium Salts Upon the Decomposition Rate of Ammonium Nitrite in the Reaction $\text{NH}_4\text{Cl} + \text{NaNO}_2 \rightleftharpoons \text{NH}_4\text{NO}_2 + \text{NaCl}$ S/078/60/005/06/07/030
B004/BC14

a measurable intensity at 57°C , while the addition of ammonium salts yields measurable N_2 volumes already at 56°C . The anions of the ammonium salts speed up the reaction in the lyotropic series

$\text{CNS}^- > \text{Br}^- > \text{NO}_3^- > \text{Cl}^- > \text{SO}_4^{2-} > \text{CH}_3\text{COO}^-$. The accelerating effect of NH_4^+ salts is explained by the increase in concentration of the NH_4^+ ion, the concentration being a factor of the equation according to which the decomposition of NH_4NO_2 is most likely to occur: $d(\text{N}_2)/dt = k_1 [\text{NH}_4^+][\text{NO}_2^-][\text{HNO}_2]$.

The anions of potassium salts slow down the decomposition rate of NH_4NO_2 in the same order. The anions of sodium salts have a similar, slightly more retarding action. With them, Cl and SO_4 change their place in the order. The strongly inhibiting action of the acetate ion is explained by the low reactivity of HNO_2 in its presence. With respect to the inhibition of the decomposition of NH_4NO_2 the cations range in the following order:

Card 2/4

The Influence of Some Ammonium-, Potassium-, and Sodium Salts Upon the Decomposition Rate of Ammonium Nitrite in the Reaction $\text{NH}_4\text{Cl} + \text{NaNO}_2 \rightleftharpoons \text{NH}_4\text{NO}_2 + \text{NaCl}$ 8/078/60/005/06/07/030
B004/B014

$\text{NH}_4^+ < \text{K}^+ < \text{Na}^+$. The influence of the ions upon the decomposition rate is explained by their hydration. Ions with a relatively low solvation heat, like CNS^- , Br^- , NO_3^- , NH_4^+ exhibit a greater accelerating or lesser inhibiting effect, respectively. The hydration is regarded as a substitution of ions for water molecules in the quasicrystalline structure of water. This reaction goes along with a heat effect, with thermal conductivity increasing with the ionic radius. Thus, the higher decomposition rate in the presence of bromine ions, as compared with chlorine ions, is explained by the larger radius of Br^- in aqueous media, whereby the quasicrystalline structure of water is weakened and the motion of heat is facilitated. The cations and anions investigated had an additive effect. The author mentions papers by K. P. Mishchenko (Ref. 8), M. D. Lagunov (Ref. 9), N. Ye. Khomutov (Ref. 10), A. F. Kapustinskiy and I. I. Ruzavin (Ref. 12). There are 3 figures and 12 references: 6 Soviet, 5 German, and 1 Austrian.

Card 3/4

The Influence of Some Ammonium-, Potassium-, S/078/60/005/06/07/030
and Sodium Salts Upon the Decomposition Rate B004/B014
of Ammonium Nitrite in the Reaction $\text{NH}_4\text{Cl} + \text{NaNO}_2 \rightleftharpoons \text{NH}_4\text{NO}_2 + \text{NaCl}$

ASSOCIATION: Vyushiy sel'skokhozyaystvennyy institut im. V.Kolarova, Y
Kafedra obshchey khimii, Plovdiv (Bolgariya) (Higher
Agricultural Institute imeni V.Kolarov, Chair of General
Chemistry, Plovdiv (Bulgaria))

SUBMITTED: January 13, 1959

Card 4/4

YENCHEVSt
BULGARIA

Diseases of Farm Animals - Diseases Caused by Viruses
and Rickettsiae.

R-3

Abs Jour : Ref Zhur - Biol., No 14, 1958, 64656

Author : Ivanov, Ks., Zhelev, Vl., Yanchev, St.

Inst : Institute of Experimental Veterinary Medicine of the Bulgarian Academy of Sciences.

Title : The Study of the Morphological Changes in Swine Plague in Relation to the Diagnostic Criteria of this Disease.
8. Changes in the Stomach and Intestines.

Orig Pub : Izv. In-ta eksperim. vet. med. B"lgar. AN, 1956, 4, 213-231.

Abstract : The authors analyze the results of the investigation of the gastrointestinal tract in 196 pigs sacrificed on the 4th-6th day following experimental infection with plague, and in 19 swine which perished from spontaneous acute plague.

Card 1/2

- 18 -

BULGARIA/Diseases of Farm Animals - Diseases Caused by Viruses
and Rickettsiae

R-3

Abs Jour : Ref Zhur - Biol.: No 14, 1958, 64656

They observe that in acute plague hyperemia, hemorrhages and lymphoidocytic infiltrates are encountered in the mucosa more often than it is usually accepted. Besides hemorrhagic diathesis, the plague virus of swine also causes the necrotic processes, especially in the glandular part of the stomach and in the ileum, leading to the formation of the impregnated with fibrin, circumscribed, button-like, false membranes or sores. The authors do not consider as characteristic of the swine plague such changes in the large intestine as the inflammation of the terminal part of it, and the eosinophilia in its submucosa.

Card 2/2

USSR/General Biology - Genetics. Plants Genetics.

B.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 94692

Author : Yenchov, Yanko

Inst :

Title : Adequacy of Changes in Heridity During Transformation of Spring Forms in Winter.

Orig Pub : Agrobiologiya, 1957, No 5, 101-105

Abstract : The author transformed spring forms of wheat and barley into winter by means of seeding before winter. According to his data, the erythrospermum variety was transformed into the lutescens; in the lutescens variety 1163 varieties of erythrospermum and milturum appeared. -- S.Ta. Krayevoy

Card 1/1

- 34 -

YENCHEV, Ya., kand.biolog.nauk; MOSKOV, I.; BOZOVA, L.

Developing Eritrospermum 341 spring wheat into frost resistant
winter wheat. Dokl.Akad.sel'khoz. 24 no.6:10-14 '59.
(MIRA 12:9)

1. Sel'skokhozyaystvennyy institut im. G.Dimitrova, Bolgariya,
g.Sofiya. Predstavlena akademikom M.A.Ol'shanskim.
(Wheat breeding)

YENCHEV, Ya., kand.biol.nauk, MOSKOV, I.; BOZOVA, L. (Bolgariya)

Changes in anatomical and physiological properties of wheat when transformed from spring varieties into winter varieties. Agrobiologia no.6:866-872 N-D '60. (MIRA 13:12)

1. Sel'skokhozyaystvennyy institut imeni G.Dimitrova, g. Sofiya.
(Wheat)

YENCHEV, Ya.; MOSKOV, I.; BOZOVA, I.

Developing heritable winter hardiness in the Mutans-103 barley by
controlled cultivation. Dokl. AN SSSR 135 no.6:1536-1538 D '60.
(MIRA 13:12)

1. Sel'skokhozyaystvennyy institut im. G. Dimitrova, Sofiya,
Bolgariya. Predstavleno akademikom T.D. Lysenko.
(Barley) (Plants--Frost resistance) (Heredity)

YENCHEV, Ya. (Narodnaya Respublika Bolgarii); BOZOVA, L. (Narodnaya Respublika Bolgarii)

Physiological and biochemical changes in the process of transforming spring varieties into winter varieties. Agro-biologiya no.6:803-814 N-D '63. (MIRA 17:2)

1. Sel'skokhozyaystvennyy institut imeni G. Dimitrova, Sofiya.

YFNCHV, Ya.; BOZOVA, L.

Induced physiological and biochemical changes in the process of the transformation of spring into winter varieties of wheat. Agrobiologiya no.5:671-680 S-O '65.

(MIRA 18:9)

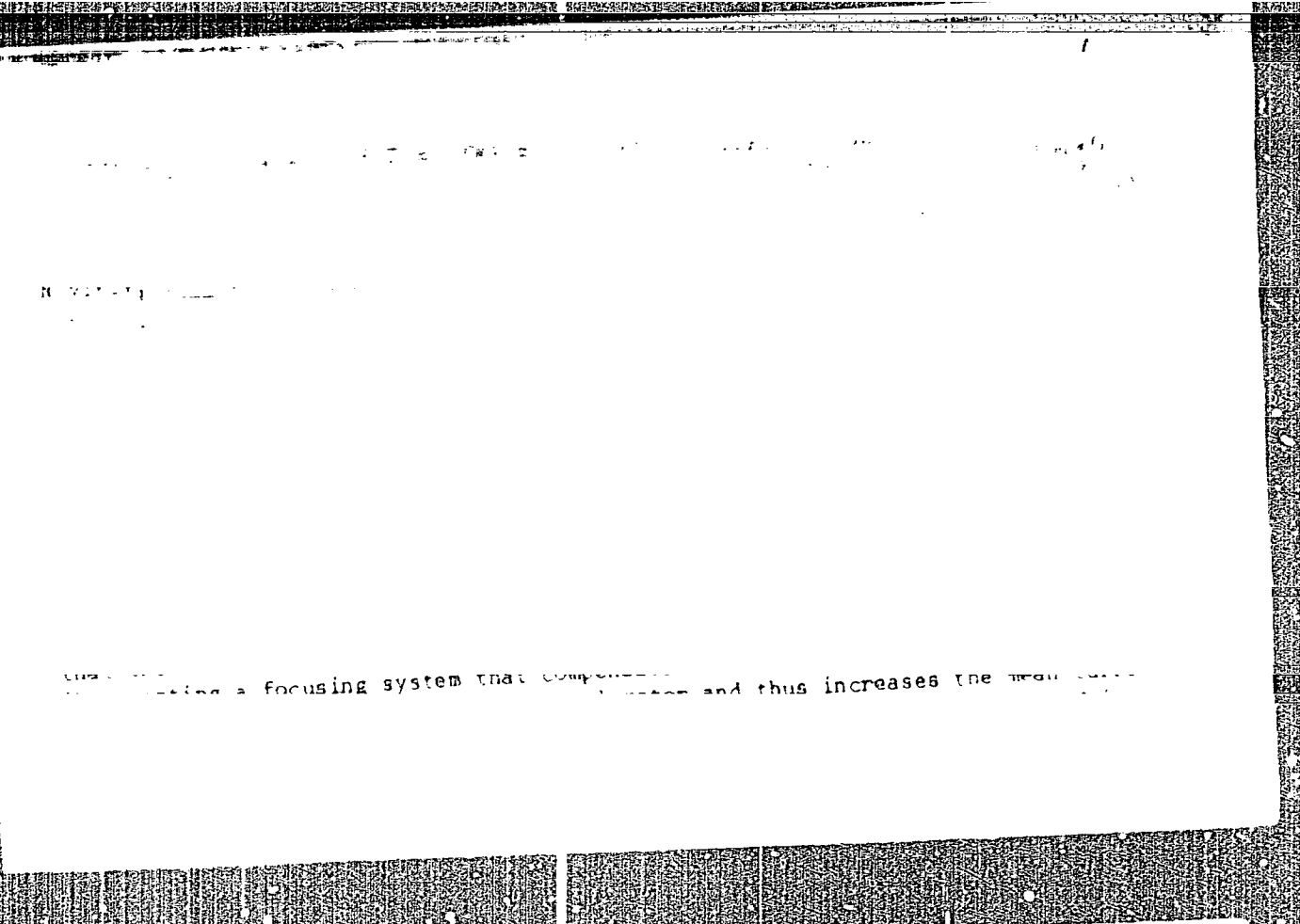
1. Vysshiy sel'skokhozyaystvennyy inatitut imeni G.Dimdrova, Sofiya, Bolgariya.

DANILOV, V.I.; YENCHEVICH, I.B.; NOVIKOV, D.L.; POLFEROV, E.A.;
SAFONOV, A.N.; FEOKTISTOV, B.V.

[Calculation of the initial region of stable phase oscillations in a synchrocyclotron] Raschet nachal'noi oblasti ustoychivyykh kolebaniy v sinkhrotsiklotrone. Dubna, Ob"edinenyyi in-t iadornykh issl. 1963. 24 p. (MIRA 17:7)

DANILOV, V.I.; YENCHEVICH, I.B.; ZAMOLODCHIKOV, B.I.; MARCHENKO, B.N.; NOVIKOV,
D.L.; POLFEROV, E.A.; ROZANOV, Ye.I.; SAVENOV, A.L.; SAFONOV, A.N.

Increase in intensity of a proton beam in a six-meter synchro-cyclotron
of the United Institute of Nuclear Research. Atom. energ. 16 no.1:9-11
Ja '64. (MIRA 17:2)



... a focusing system that compensates for aberrations and thus increases the resolution...

... length of the

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630010-3

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630010-3"

A 1

ASSOCIATION: Ob"vedinennyy institut yadernykh issledovaniy, Dubna (JOINT INSTITUTE)

the asynchrocyclotron 19

NO. 2, MOSCOW, ATOMIZOR, 1950

$$r = A_0(1 - \beta^2)^{1/2} (A_r(1 - \beta^2) - A_0 \alpha) \cdot \frac{\alpha}{r^2}$$

(1)

$$\theta = \frac{1}{r} \left\{ A_0(1 - \beta^2)^{1/2} A_0(1 - \beta^2) - A_r \alpha \left[1 - \frac{2\alpha r}{r} \right] \right\}$$

Card 2 3

$E_0 = U_0/D$; U_0 -amplitude of the accelerating voltage; D -dee aperture; ω_0 -frequency of revolution of an ion at the center. The present report discusses the solution of the equations of motion (1) for given boundary value conditions and parameters in

obtain curves of (a) radius and phase versus time, (b) capture effectiveness versus

from the center to a radius of 0.9 cm.

L 4117-66 EMT(m)/EPA(w)-2/EWA(m)-2 IJP(c) DM

ACCESSION NR: AP5023773

UR/0089/65/019/003/0289/0292
621.384.611

AUTHOR: Danilov, V. I.; Yenshevich, I. B.; Zamolodchikov, B. I.; Polferov, E. A.;
Rozaov, Ye. I.; Smirnov, V. I.; Testov, V. G.

TITLE: The increase in pulse duration of the 690 MEV OIYA1 synchrocyclotron particle beam

SOURCE: Atomnaya energiya, v. 19, no. 3, 1965, 289-292

TOPIC TAGS: synchrocyclotron, ion acceleration, ion accelerator, MEV accelerator

ABSTRACT: In synchrocyclotrons ions are accelerated in bunches, the shape and dimensions of which are determined by radial-phase and betatron oscillations. The present authors describe a method for pulse extension which was tested on the OIYA1 synchrocyclotron and yielded results summarized in Fig. 1 of the Enclosure. The method is based on the analysis of the approximate expressions for pulse duration.

$$T_{mn} = \int_{r_M}^{r_m} \frac{dr}{v_r r_s(t) + v_{n,m}(t)}$$

Card 1/4

L 4147-66

ACCESSION NR: AP5023773

where the speed of equilibrium orbit widening is given by

$$\dot{r}_e = \frac{r_e}{1-n} \cdot \frac{1}{E_s \beta_s^3} \cdot \frac{\omega_s}{2\pi} e_0 V_0 \sin \varphi_s =$$

$$= \frac{r_e}{1-n} \cdot \frac{1}{K_s \beta_s^3 \omega_s} \cdot \frac{d\omega}{dt}$$

\int B.M. (t) is velocity of displacement of the equilibrium orbit at the φ_n azimuth caused by the excitation of the first harmonics of the magnetic field;

$$n = -\frac{r}{H} \cdot \frac{\partial H}{\partial r}; K = 1 + \frac{n}{1-n} \cdot \frac{1}{\beta^3}; \beta = \frac{v}{c};$$

v, ω, E are velocity, rotational frequency, and total energy of the particle, respectively;
 eV_0 - maximum possible energy increment per turn; subscripts s characterize equilibrium values;

$$\delta r = q_0 + q_e \text{ with } q_{s,m} = 0;$$

$$\delta r = q_0 + 2q_e \text{ with } \dot{r}_s = 0$$

Card 2/4

L 447-66

ACCESSION NR: 5023773

and \int_r , \int_c is the maximum amplitude of radial betatron and radial-phase oscillations respectively. It is shown that the length of the pulse may be extended by increasing the interval of radial oscillation amplitudes and by decreasing the beam velocity along the radius (this can be achieved by increasing, in time, the forced radial oscillations for $F_g = 0$). A brief description of the design and operation of the necessary circuits is also given. Orig. art. has: 9 formulas and 5 figures.

ASSOCIATION: None

SUBMITTED: 06Feb65

ENCL: 01

SUB CODE: NP, MA

NO REF SOV: 001

OTHER: 006

Card 3/4

L 1117-66

ACCESSION NR: AP5023773

ENCLOSURE: 01

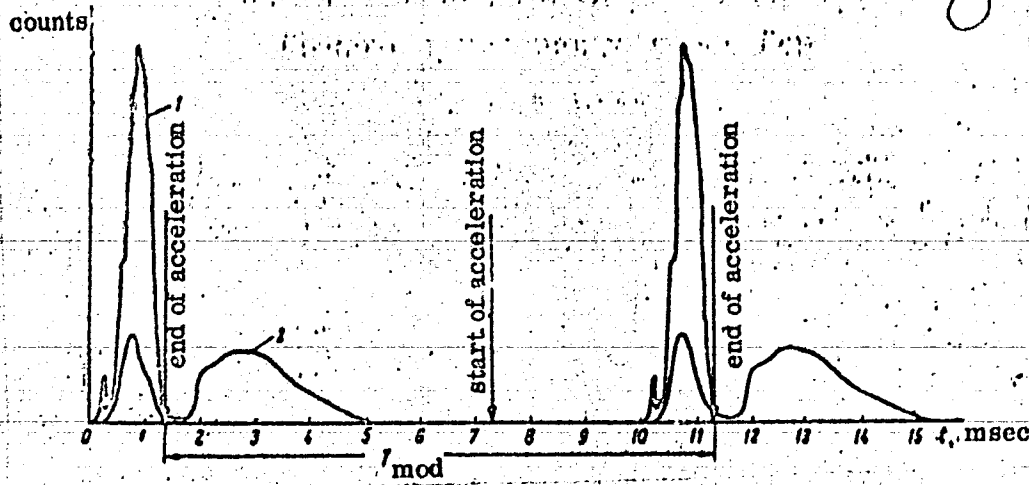


Figure 1. Shape of OIYaI synchrocyclotron beam pulses. 1- standard operation; 2 - extended beam pulse operation.

Card 4/4

L 07919-67 EWT(m) IJP(c)

ACC NR: AP6021991

SOURCE CODE: UR/0120/66/000/003/0019/0022

AUTHOR: Danilov, V. I.; Yenchevich, I. B.; Rozanov, Ye. I.; Tomilina, T. M.;
Shestov, A. V.

335B

ORG: Joint Nuclear Research Institute, Dubna (Ob'yedinenny institut yadernykh issle-
dovaniy)

TITLE: Control of a 680 Mev synchrocyclotron //

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 19-22

TOPIC TAGS: synchrocyclotron, particle acceleration, coincidence circuit

ABSTRACT: The paper presents a system of control of various synchrocyclotron operating conditions. A phototransducer, having an optico-mechanical connection with a high frequency generator furnishes square pulses of positive polarity. These pulses are used for the regulation of the generator and for synchronizing the operating auxiliary apparatus with the accelerator. A flow chart of this operation is shown. In the continuous mode of operation, the capture and acceleration of the particles occurs in each period of modulation. The synchronization pulses, coincident with the front of the phototransducer pulses, are directed into two channels. In the first of these, the actuating pulses are formed; these pulses move into the exit tube with or without time delay and then into the operator of the high frequency generator. In the second chan-

UDC: 621.384.611.2

Card 1/2

L 07919-67

ACC NR: AP6021991

3

nel, the cut-off pulses are formed; these pulses move into the operator with a time delay, approximately equal to half the period of modulation. In the single mode, acceleration of the particles occurs with the frequency of the starting pulses. The synchronization pulse, before entering the actuating pulse channel, must go through a coincidence circuit. After leaving the coincidence circuit the pulse returns the trigger to the initial condition. Other modes of operation of this system include the single mode with damping, accumulation, increase of pulse width of beam, and operation of an ionic source with the pulse method. Lost time due to shutdown using this control scheme did not exceed 0.1% of the operating time of the accelerator. The authors thank V. I. Ivanov, Yu. V. Maksimov, and N. P. Sechenov for taking part in the construction of the apparatus. Orig. art. has: 3 figures.

SUB CODE: 20/

SUBM DATE: 29Apr65/

ORIG REF: 010/

OTH REF: 001

Card 2/2

vmb

BICH, Ya.A., kand. tekhn. nauk; MURATOV, N.A.; BLISHCHENKO, S.M.;
YENDAL'TSEV, B.M.

Rock bumps and efforts to control them in mines of the Suchan
deposit. Ugol' 39 no.5:64-67 My '64. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut
(for Bich). 2. Shakhta No.21 Suchanskogo mestorozhdeniya (for
Muratov). 3. Trest Suchanugol' (for Blishchenko). 4. Shakhta
No.10/16 Suchanskogo mestorozhdeniya (for Yendal'tsev).

YENDAL'TSEV, M. D.

Device for Wire Remote Control. Patent, Class 21s, 45₀₂, No 103201,
Elektrosvyaz, No 1, Jan 57.

YENDEN, V. -SHOROKHOV, N.

Facades

Cleaning facades of residential buildings. Zhil.-kom,khoz. 2 no. 7, 1952

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, NOVEMBER 1952. UNCLASSIFIED.

YENDONOV, Ch.

Budget in the service of the economic and cultural development of
the Buryat A.S.S.R. Fin. SSSR 37 no.7:31-34 JI '63. (MIRA 16:8)

1. Ministr finansov Buryatskoy ASSR.
(Buryat A.S.S.R.—Budget)

BONDAREV, G.I.; ZINOV'YEV, Ye.Sh.; NEPOKLONOV, Yu.A.; YENDOVITSKAYA, I.S.

Supply of vitamins C, B₁, B₂ and PP for fish processing
workers on fishing craft in the North Atlantic. Vop. pit.
22 no.5:58-60 S-0 '63. (MIRA 17:1)

1. Iz otdela gigiyeny pitaniya (zav. - kand. med. nauk
G.I. Bondarev) Tsentral'noy nauchno-issledovatel'skoy
laboratorii gigiyeny vodnogo transporta, Moskva.

BONDAREV, G.I.; ZINOV'YEV, Ye.Sh.; NEPOKLONOV, Yu.A.; YENDOVITSKAYA, I.S.

Energy expenditure of fishery workers on trawlers fishing in
the Barents Sea and North Atlantic. Vop. pit. 21 no.6:40-43
N-D '62. (MIRA 17:5)

1. Iz Tsentral'noy nauchno-issledovatel'skoy laboratorii
gigiyeny vodnogo transporta, Moskva.

ARKHANGEL'SKIY, S.N.; YENDOVITSKAYA, T.V.; NEVEROVICH, Ya.Z.; SOKOLOV, M.V.,
red.; ALPATOVA, V.V., red.; KOZLOVSKAYA, M.D., tekhn.red.

[Visual aids and experiments for a course in psychology; for
pedagogical schools] Nagliadnye posobiia i opyty v kurse psikhologii;
dlia pedagogicheskikh uchilishch. Pod red. M.V. Sokolova. Moskva,
Gos.uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 103 p.

(MIRA 12:1)

(Psychology--Study and teaching)

YENDOVITSKIY, D., metodist

Creative work of the rural vocational schoolteachers. Prof.-tekh.
obr. 22 no.6:5-6 Je '65. (MIRA 18:7)

1. Mordovskoye respublikanskoye upravleniye professional'no-
tekhnicheskogo obrazovaniya.

ENDOVITSKIY, V. I.

Budnikov, P.P. and Endovitzki, V.I. Introducing Binary Kaolins into the Fire-Clay Mix in order to increase its alumina content and refractoriness. Domez, 1932 (1-2) 11-13; Ber. deut. keram. Ges., 13(6) 253-56 (1932.--With the view of improving the quality of some Russian firebrick, experiments were conducted in which binary kaolins were added to the fire-clay mix. Four brick samples, containing 57.68, 56.75, 55.59, and 55.24% SiO_2 , respectively, and 36.07, 37.33, 37.99, and 39.25% Al_2O_3 , respectively were prepared. These samples were burned at 1350°. The resulting properties were: mechanical strength 239, 255, 289, and 298 kg./sq. cm; refractoriness 1720°, 1735°, 1740°, and 1745°; beginning of deformation under 2 kg./sq. cm. pressure 1395°, 1365°, 1370°, and 1400°. A semicommercial plant for the manufacture of brick of the fourth type is recommended.

YENDOVITSKIY, V. I.

Dehydration of gypsum during its treatment with steam in an autoclave. P. P. BUNNIKOV, V. I. YENDOVITSKIY AND V. K. DELNEKA. *Sbornik Trudov Nauch.-Issledovatel'sk. Gipsov. Prom.*, 1945, pp. 9-18. — A systematic investigation was conducted on the dehydration of gypsum by treating it with steam under pressure in an autoclave to obtain $\text{CaSO}_4 \cdot 0.5\text{H}_2\text{O}$. Gypsum from the Artemovsk deposits in the Donets Basin was used, which analyzed SiO_2 1.51, Al_2O_3 0.21, Fe_2O_3 0.13, CaO 31.02, MgO 0.31, SO_3 40.85, and water of hydration 20.14%. Treatment for 2 hr. at 8 kg./cm.² (gauge pressure) followed by drying at 67° to 70° gave practically 100% of the hemihydrate. Calculation of the heat balance shows that the dehydration can be conducted in one apparatus (autoclave) with the specific heat consumption not greater than that of the most advanced gypsum calcination plants. B.Z.K.

3091

YENDRIKHOVSKAYA, A.T.; PIROZHENKO, A.V.

Fixing automatic feelers on tenter dryer frames. Obm.tekh.
opyt. [MLP] no.10:37-38 '56. (MIRA 11:11)
(Textile machinery--Attachments)

67268

5.3830

~~5(4), 5(3)~~

AUTHORS:

Kozlov, P. V., Yendrykhovskaya, A., Kargin, V. A., Academician

SOV/20-129-4-36/68

TITLE:

Investigation of the Temperature-dependent Transformations in Synthetic Polymers With Rigid Chains

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 4, pp 844-846 (USSR)

ABSTRACT:

The authors investigated polyurea as a typical synthetic polymer with rigid chains. It was produced by polymerization on the boundary of two phases. Phosgene dissolved in benzene was emulsified with hexamethylenediamine dissolved with water. A 7% solution of sodium oleate served as emulsifier. If the 15% hexamethylenediamine solution is saturated with sodium chloride and soda, an amorphous powder with high molecular weight is formed, which is not soluble in any organic solvent with the exception of cresol and formic acid and has a highly ordered structure (Fig 1). The investigation of the temperature-dependent properties was carried out by means of dynamometric scales, a direct dependence of the deformation on temperature being found. Between 230-300°C chemical decomposition already occurs. In order to reduce the temperature at which polyurea is

Card 1/3

67268

Investigation of the Temperature-dependent Transformations in Synthetic Polymers With Rigid Chains SOV/20-129-4-36/68

transformed, it was plastified according to two methods: a) by the addition of a polymer with elastic chains (copolymer of caprolactam with hexamethylenediamine and adipic acid), b) by swelling in cresol. Figure 1 shows the influence exerted by temperature on polyurea plastified by copolymer. With the addition of 75% copolymer, two processes may be observed: First, transition to the viscous state occurs, after which vitrification follows at a certain temperature. The behavior of polyurea swelled in cresol is shown in figure 3. Also in this case the viscous state occurs with an increase in temperature. On the basis of these results the authors point out the following two possibilities: 1) Hardening of polymers with elastic chains by the admixture of polymers with rigid chains, and 2) reduction of temperature by plastification in order to make working with polymers with rigid chains possible. There are 3 figures and 5 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
Card 2/3 (Moscow State University imeni M. V. Lomonosov)

67268

Investigation of the Temperature-dependent Transformations in Synthetic
Polymers With Rigid Chains

SOV/20-129-4-36/68

SUBMITTED: September 1, 1959

Card 3/3

2 14513-b5 DWT: a / EWP(h) 81/1/28 10/09/MLE

TITLE: Synthesis and properties of sulfides and phosphides of rare earth metals.

TOPIC TAGS: rare metal sulfide, rare earth metal sulfide, rare metal phosphide, rare earth metal phosphide sulfide synthesis, phosphide synthesis

ABSTRACT: The sesquisulfides of lanthanum, cerium, praseodymium, and neodymium were obtained by sulfidizing the respective metal oxides with dry hydrogen sulfide at 1000-1100°C for 1-2 hr. The sesquisulfides obtained had an average sulfur content of 10.5%. The synthesis of a mixture of sesquisulfides and oxides with carbon in a vacuum at 1500-1700°C produced monosulfides which contained 1.2-1.5% carbon.

Card 1/2

L 14313-65

ACCESSION NR: AT4047134

Gallium and lanthanum phosphides were obtained by treatment of the respective oxides with phosphine at 900-950 and 1200-1300C, respectively.

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute of Problems of the Science of Materials, AN UkrSSR)

SUBMITTED: 08Jun64

ENCL: 00

SUB CODE: MM, CC

NO REF SOV: 008

OTHER: 000

ATD PRESS: 3136

Card 2/2

ACC NR: AP6019225

(A)

SOURCE CODE: UR/0073/66/032/002/0115/0118

AUTHOR: Samsonov, G. V.; Veroykina, L.L.; Yendrzheyevskaya, S. N.; Tikhonova, N.N.

ORG: Institute of the Problems of Material Science, AN UkrSSR (Institut Problem materialovedeniya AN UkrSSR)

TITLE: Production and some properties of rare-earth phosphides

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 32, no. 2, 1966, 115-118

TOPIC TAGS: rare earth element, phosphide, lanthanum compound, neodymium compound, samarium compound, oxidation

ABSTRACT: The literature was reviewed on various methods of producing rare-earth phosphides together with the tabulated data on their crystallochemical properties (lattice parameters and densities determined from x-ray diffraction patterns). The reaction of phosphine (PH_3) with rare-earth metals or their oxides was used in this investigation for preparing La, Nd, and Sm phosphides. Phosphidization was carried out in an apparatus described previously (L. L. Veroykina and G. V. Samsonov, Zh. neorg. kh., 5, 1888, 1960) by passing PH_3 over heated metal or oxide powder. The LaP, having a nearly stoichiometric composition, was obtained by the reaction of PH_3 with La_2O_3 at 1200-1250C and a 3-5 hr exposure to the flow of H. The LaP powder was dark gray in color, it was insoluble in water and in cold and heated alkali solutions, but it

Card 1/2

UDC: 546+661.865

ACC NR: AP6019225

dissolved well in diluted and concentrated HCl and aqua regia, and was weakly soluble in H_2SO_4 at any concentration. The NdP was produced either from metallic Nd at 1100C and a 3 hr exposure to an Ar atmosphere, or from Nd_2O_3 at 1350C and a 3 hr exposure in H. The NdP powder had a black color, a nearly stoichiometric composition, was insoluble in H_2O , but dissolved in the same solvents as LaP; SnP of nearly stoichiometric composition was produced from metallic Sn at 900C after 7 hrs. of phosphidization, and from Sn_2O_3 at 900-1350C and 2-5 hrs. of phosphidization. From Sn_2O_3 the SnP was formed most efficiently at 1300-1350C. It was in the form of black powder which did not change during prolonged storage in air. The SnP dissolved well in HNO_3 of various concentrations, in HCl, and partly in H_2SO_4 . It did not dissolve in H_2O and alkali solutions either cold or boiling. Thus, LaP, NdP, and SnP all dissolved well in diluted or concentrated HNO_3 . To keep the P in solution it was necessary to dissolve them in the presence of a strong oxidizer using either a mixture of HNO_3 with bromine water or diluted HNO_3 (1:1) saturated cold by $KBrO_3$ solution. Orig. art. has: 1 fig. and 2 tables.

SUB CODE: 07/ SUBM DATE: 30Sep64/ ORIG REF: 007/ OTH REF: 012

Card 2/2

S/057/62/032/008/014/015
B104/B102AUTHORS: Yendzheyets, G., Molchanov, V. A., Tel'kovskiy, V. G., and Faruk, M. A.

TITLE: Angular distribution of evaporated particles in the irradiation of single crystals with an ion beam

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 8, 1962, 1032 - 1033

TEXT: The angular distribution of the particles produced when the (100) faces of copper and nickel single crystals were irradiated with argon and neon ions was measured. The diameter of the single crystal surface irradiated was smaller than 8 mm, the distance between target and collector 95 mm. The target temperature was lower than 100°C, the angle of incidence of the ions 20°. After irradiation five Wehner spots became visible on the collector: four at the corners corresponding to the (110) axis, and one in the center which corresponded to the (100) axis. The density of the spots was determined photometrically. (Fig. 1). The angular distribution of particles and that of the sputtering coefficient do not depend on mass and energy of the ions. There are 3 figures.

Card 1/2

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