

YEZHNIKOV, I. I.

"Characteristics of Early Embryonal Phases During the Incomplete and Complete Conversion of Insects"

Tr. In-Ta Morfologii Zhivotnykh ANSSSR, No 8, 1953, 130-153

Author criticizes current teachings that the metamorphosis of invertebrates is a process of loss of larval adaptation, but claims that it is a primary metamorphosis. The transformation of insects appears to be a rare example of primary metamorphosis arising from concealed development (by the egg membrane). Author believes however that larvae of insects conform - by their complete transformation, to belated embryonal stages of insects with incomplete metamorphosis; that source of the complete transformation is the decrease in the necessary egg yolk during evolution. Author lists literature which bears him out. (RZhBiol, No9, 1955)

SO: Sum-No 787, 12 Jan 1956

EZHNIKOV, I. I.

"Metamorphosis, Latent and Direct Development", (p. 479) by Ezhikov, I. I.

SO: Advances in Contemporary Biology (USPEKKI SOVREMENNOI BIOLOGII) Vol. V, No. 3 1936

YEZHNIK, I.I.; KOVALEV, I.A.

Determining the heat capacity of benzene, paraxylene,
metaxylene and cyclohexane in a supercooled state. *Khim. i*
tekh. topl. no.10:12-14 0 '56. (MLRA 9:11)

(Heat capacity) (Hydrocarbons)

YEZHIK, I.I.; KOVALEV, I.A.

Determining the correlation between contrast factors in the
analysis of spectral lines situated in various spectral ranges.
Opt. 1 spektr. 1 no.8:1010-1011 D '56. (MLRA 10:2)

1. Khar'kovskiy inzhenerno-stroitel'nyy institut.
(Spectrum analysis)

YEZHIK, I.I.

Infrared luminescence of X-ray treated CaF_2 , NaCl , KCl and KBr
crystals. Opt. i spektr: 1 no.8:1011-1013 D 56. (MLRA 10:2)

1. Khar'kovskiy inzhenerno-stroitel'nyy institut.
(Luminescence) (Infrared rays)

YEZHNIK, I.I.; SHAVILO, S.T.

Role of M-, R-, and F'-color centers in the mechanism of the infrared fluorescence of F-centers in alkali-halide crystals. *Izv.vys.ucheb.zav.; fiz. no.1:46-53 '61.* (MIRA 14:7)

1. Khar'kovskiy pedagogicheskiy institut imeni G.S.Skovorody.
(Color centers) (Alkali metal halides--Crystals)
(Infrared rays)

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S/051/62/012/001/010/020
E032/E414

24.3500 (1137, 1138)

AUTHOR: Yezhik, I.I.

TITLE: Infrared luminescence of F-centres in X-rayed fluorite crystals

PERIODICAL: Optika i spektroskopiya, v.12, no.1, 1962, 92-94

TEXT: This is a continuation of work reported in Ref.1 (Optika i spektr., 1, 1956, 1011) in which the infrared fluorescence of X-rayed fluorite crystals was measured between 77 and 680°K. A detailed account of the method used to obtain the infrared fluorescence spectra was given by the author in a previous paper (Ref.2: Ukr. fiz. zh., v.3, no.1, 1958, 56). The infrared fluorescence was measured immediately after the crystals had been exposed to X-rays. Curves of the intensity of infrared fluorescence versus temperature were found to exhibit well-defined peaks at the following temperatures: 110, 186, 225, 268, 292, 330 and 350°K. The position of the peaks was not affected by annealing at 800°K for 8 h. However, after this process the intensity was considerably higher, particularly at higher temperatures. Additional spectrometric measurements showed that

Card (1/3)

2

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Infrared luminescence of ...

the concentration of F-centres in annealed fluorite crystals was greater by an order of magnitude as compared with unannealed crystals. Curves of the intensity of visible and ultraviolet luminescence versus temperature were found to have well-defined peaks at 110, 186, 225, 270, 294, 330, 350, 400, 470, 510, 540, 580, 610 and 640°K. The peaks at 330, 350, 400, 470, 510, 540, 580 and 610°K are said to be in good agreement with the results reported by E. Bandret (Ref.3: Helv. phys. acta, v.26, 1953, 383) and J.J.Hill, J. Aron (Ref.4: J. Chem. Phys., v.21, 1953, 223). Fig.3 shows the infrared fluorescence spectrum for fluorite at room temperature (curve 1) and at liquid nitrogen temperature. Curve 2 has a maximum at 1.24 μ . At room temperature this maximum is shifted towards longer wavelengths by 0.02 to 0.03 μ . A theory of these phenomena is said to be given by the present author in Ref.2. There are 3 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to an English language publication - Ref.4 - is quoted in the text.

SUBMITTED: January 14, 1961

Card 2/2 2

YEZHNIKOV, I.

"The Principle of recapitulation and the conditions of the historical understanding of development. On the theory of historical heterogenesis," (p. 303) by S. G. Krizhanovsky, and I. Ezhikov.

SO: Journal of General Biology (Zhurnal Obschei Biologii) Volume II No. 2, 1941.

YEZHNIKOV, I.I.

"Treatise on Zoology" Vol. 1 (p.119) by Professors E.G. Bekker, I.I. Ezhikov, L.B. Levinson, A.A. Paramonov; Edited by B.S. Matveev and Prof. L.B. Levinson; Reviewed by D. van der Flaas

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. XV, 1942, No. 1

YEZHNIKOV, I.I.

Characteristics of early embryonic stages in the case of incomplete and complete transformation of insects. Trudy Inst.morf.zhiv. no.8:130-153 '53. (MLA 6:9)
(Embryology--Insects)

YEZHNIKOV, I.I.

Organization of bagworms of the genus *Fumea* (Lepidoptera, Psychidae). Trudy
Inst.morf.zhiv. no.8:154-169 '53. (MLBA 6:9)
(Psychidae)

YEZHNIKOV, N.M., ingh.

New operating unit for loading machines. *Vekh. i avtom. proizv. 14*
no. 12:37 D '60. (MIRA 13:12)

(Mining machinery--Technological innovations)

YEZHNIKOV, N.N., inzh.; SIMONOV, L.V., inzh.; ULITSKIY, D.M., inzh.

Testing the "Krivbass-250" loader. Shakht. stroi. 5 no.8:
16-17 Ag '61. (MIRA 16:7)

1. Nauchno-issledovatel'skiy gornorudnyy institut.
(Mining machinery--Testing)

YEZHNIKOV, N.N., inzh.; SIMONOV, L.V., inzh.: OLEYNIK, F.A., gornyy tekhnik

PML-9 loader. Gor. zhur. no.11:56 N '61. (MIRA 15:2)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.
(Mining machinery)

AYRUMOV, Arsen Mikhaylovich, kandidat ekonomicheskikh nauk; YEZHKOVA, V.A.,
redaktor; DEMIDOVA, L.F., tekhnicheskij redaktor

[Analyzing the economic aspects of cotton growing collective farms]
Analiz khoziaistvennoi deiatel'nosti khlopkovodcheskogo kolkhoza.
Tashkent, Gos. izd-vo Uzbekskoi SSR, 1955. 181 p. (MLBA 9:8)
(Collective farms) (Cotton growing)

YEZHKIN, G.A., inzhener po defektoskopii (Yaroslavl').

Device for wetting rails. Put' i put.khoz. no.6:44 Je '57. (MIRA 10:7)
(Railroads--Rails)

YEZHKIN, G.A., starshiy inzh. po defektoskopii (g. Yaroslavl');
~~LOBANOV, V.V.~~

Transistorized voltage converter. Put' i put.khoz. 5 no.9:33 S
'61. (MIRA 14:10)

1. Nachal'nik dorozhnoy defektoskopnoy masterskoy Severnoy dorogi,
g. Yaroslavl'.
(Electric current converters) (Transistors)

YEZHIN, N.N. (Kislovodsk)

Acrylic resins in therapy of deep dental caries. Stomatologia
no.6:7-10 N-D '54. (MLRA 8:1)

(DENTAL CAVITIES,
acrylic fillings)

(ACRYLIC RESINS,
dent. fillings, indic.)

YEZHKIN, N.N. (Kislovodsk)

Sterilization of dressing material in the work of the thera-
peutist and stomatologist. Stomatologia 38 no.3:74-75
My-Je '59. (MIRA 12:8)
(BANDAGES AND BANDAGING--STERILIZATION)

YEZHKIN, N.N.

Acrylic lacquer. Stomatologiya 40 no.2:98 Mr-Ap '61. (MIRA 14:5)

1. Iz sanatoriya Ministerstva orrony SSSR (Kislovodsk).
(LACQUER AND LACQUERING) (DENTAL PROSTHESIS)

YEZHKINA, A. N.

"The Effect of Interbreeding on the Formation of the
Characteristics of Hybrid Flax." *Card Biol Sci, All-Union Acad
of Agricultural Sci imeni Lenin (VASKONIL), Leningrad, 1953.*
(RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

YEZHKINA, A.N.

Vegetation of the northern slope of the Skalistyy Range between the Baksan and Tsyyl Rivers. Uch.zap. Kab. - Balk. gos. un. no.14:57-64'62. (MIRA 16:6)
(SKALISTYY RANGE (KABARDINO-BALKAR A.S.S.R.)--BOTANY)

YEZHKOVA, A.P., dotsent

Discrepancies in the curricula. Zdorov'e } no.1:12 Ja '57.
(COLLEGE SPORTS) (MLRA 10:2)

TEMPER, A.S., mayor meditsinskoy sluzhby; BOKHANOV, H.V., mayor meditsinskoy sluzhby; ZAGRANICHNIY, L.A., mayor meditsinskoy sluzhby; YEZHOV, A.S., podpolkovnik meditsinskoy sluzhby; KATASOV, S.V., podpolkovnik meditsinskoy sluzhby

Role of prophylactic additions of vitamins to food in the decrease of morbidity. Voen.-med.zhur. no.3:49-51 Mr '61. (MIRA 14:7)
(VITAMINS) (SOLDIERS--DISEASES AND HYGIENE)

I, 44333-66 EWT(d) IJP(c)
ACC NR: AP6019056

SOURCE CODE: UR/0041/66/018/001/0048/0065

35
B

AUTHOR: Yezhov, I. I. (Kiev)

ORG: none

TITLE: Markovian chains with discrete interference for the case forming a semi-Markovian process

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 18, no. 1, 1966, 48-65

TOPIC TAGS: Markov process, queuing theory, DISTRIBUTION FUNCTION

ABSTRACT: The author studied a uniform Markovian process $\{\xi(t), \eta(t), \zeta(t)\}$ (with the first two components being integral and the third nonnegative) whose transient probabilities are of the form

$$\begin{aligned}
 P\{(i, k, x) \xrightarrow{\Delta t} (i, k, x + \Delta t)\} &= (1 - v_i \Delta t) \frac{1 - F_k(x + \Delta t)}{1 - F_k(x)} + o(\Delta t), \\
 P\{(i, k, x) \xrightarrow{\Delta t} (j, k, x + \Delta t)\} &= v_i v_{ij} \frac{1 - F_k(x + \Delta t)}{1 - F_k(x)} \Delta t + o(\Delta t), \\
 P\{(i, k, x) \xrightarrow{\Delta t} (l, m, 0)\} &= \frac{F_k(x + \Delta t) - F_k(x)}{1 - F_k(x)} b_{il}^m(x) + o(\Delta t),
 \end{aligned}
 \tag{1}$$

Card 1/2

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ACC NR: AP6019056

Here $F_k(x)$ are continuous distribution functions and v_1, v_j , and $b_{ik}^{lm}(x)$ are non-negative constants and functions, with

$$\sum_l v_{lj} = \sum_l \sum_m b_{lk}^{lm}(x) = 1. \quad (2)$$

The ergodic distribution of the process is first found under the assumption that it exists. Then the established results are justified, and the distribution of times at which the process attains a given region of phase space is investigated. The results are applied to a unilinear queueing system with consecutiveness. The flow of requests is the simplest one, with a single parameter, and the servicing time is a random quantity with a distribution function $F(x)$. Orig. art. has: 93 formulas.

SUB CODE: 12/ SUBM DATE: 08Jun65/ ORIG REF: 005/ OTH REF: 001

Card 2/2 blg

YEZHOVA, T.N.

Electrocardiography and phonocardiography in defects of the inter-ventricular septum. Uch. trudy GMI no.19:119-124 '65. (MIRA 18:8)

1. Iz kliniki gospital'noy khirurgii Gor'kovskogo gosudarstvennogo meditsinskogo instituta imeni S.M.Kirova.

DERYABINA, Ye.I.; YEZHOVA, T.N.

Changes in the electrocardiogram and phonocardiogram in defects
of Fallot's group. Uch. trudy GMI no.19:206-215 '65.

(MIRA 18:8)

1. Iz kliniki gosital'noy khirurgii Gor'kovskogo gosudarstvennogo
meditsinskogo instituta imeni S.M.Kireva.

ACC NR: AR7002228 (AN) SOURCE CODE: UR/0275/66/000/010/V028/V028

AUTHOR: Yezhkov, B. A. ; Yulchno, N. Ya.

TITLE: High-speed electronic shielding in high power high-voltage rectifiers and electron-tube oscillators

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10V187

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 49, 1966, 17-19

TOPIC TAGS: electronic shielding, electronic oscillator thyatron, ~~high voltage~~
rectifier, circuit design
electronic

ABSTRACT: This shielding device contains seven thyatrons and is fitted with a high-voltage rectifier cutoff and d-c load shunting. The high-voltage rectifier has a cutoff time \leq 14 m sec for the moment of breakdown, to cutoff of current flow through the rectifier. The pulse of the emergency current has a maximum value of 20% of the short circuit current of the anode transformer. A noninductive 0.4-ohm resistor connected to the high-voltage rectifier output is used as the emergency current pickup. At the moment of failure, the d-c load is shunted by the shielding thyatron. Flow time for the emergency current through the load is limited only by

Card 1/2

UDC: 621.314.61

ACC NR: AR7002228

the ignition time of this thyatron. A description is given of the main circuit of the shielding device developed for high-frequency units of optical glass making in which ruptures in the crucible cause frequent generator failure. [Translation of abstract] [GC]

SUB CODE: 09

Card 2/2

YEZHKOV, G., podpolkovnik

Meeting of N.G.Zaglada with conscripts. Komm.Voeruzh.Sil 3
no.23:56 D '62. (MIRA 16:2)

(Military service, Compulsory)
(Zaglada, Nadezhda Grigor'evna, 1893-)

YEZHKOVA, G.A.

Generalization of mycosis in the Itsenko-Cushing disease and its treatment with corticosteroids; survey of the literature. Vest. derm. i ven. 38 no.9:30-34 S '64. (MIRA 18:4)

1. Kafedra kozhnykh i venericheskikh bolezney (zav. - prof. A.N. Araviyskiy) I Leningradskogo meditsinskogo instituta imeni Pavlova.

YEZHKOVA, M.A.

GRITSAY, M.K.; LAVRENKO, Ye.M.; KOLMOGOROVA, V.V.; YEZHKOVA, M.A.; BERKOVICH,
B.I.; LEKOVA, T.Kh.

Sandfly fever and its control in the areas of Odessa Province,
formerly Izmail' Province. Med.paraz. i paraz.bol. 26 no.1:71-73
Ja-F '57. (MLRA 10:6)

1. Iz Ukrainskogo instituta malyarii i meditsinskoy parazitologii
imeni prof. V.Ya.Rubashkina (dir. instituta I.A.Douchenko) i
parazitologicheskikh otdeleniy Izmail'skoy gorodskoy, Reniyskoy i
Bolgradskoy rayonnykh sanitarno-epidemiologicheskikh stantsiy.
(PAPPATACI FEVER, prev. and control
in Russia)

YEZHKOVA, M.A.

Sand fly control in Izmail; an abstract. Med. paraz. i paraz. bol.
33 no.5:619-620 S-O '64. (MIRA 1814)

1. Otdel malyarii i meditsinskoy parazitologii Izmail'skoy
sanitarno-epidemiologicheskoy stantsii Odesskoy oblasti.

YEZHKOV, V.

Integral stereoscopy. WFO 7 no. 3194-56. Mr '65.

(MIRA 18:5)

1. Korrespondent zhurnala "Nauchno-tekhnicheskiye obshchestva SSSR".

YEZHKOV, V., polkovnik

In schools of communist labor. Komm. Vooruzh. Sil 4 no.18:59-60
S '64. (MIRA 17:9)

YEZHOV, Viktor Anatol'yevich; VOSTOKOVA, E.S., red.; KISELEVA, L.I.,
tekh. red.

[Leningrad workers in the struggle for the reconstruction of the
city, 1944 - 1945] Rabochie Leningrada v bor'be za vosstanovlenie
goroda, 1944-1945 gg. Leningrad, Izd-vo Leningr. univ., 1961.
105 p. (MIRA 15:1)

(Leningrad--Reconstruction)

YEZHKOVA, V.V.

FORD, G.W.K.; SKVORTSOV, S.A., redaktor; YEZHKOVA, V.V., redaktor;
SKVORTSOV, I.M., tekhnicheskiy redaktor

[Power reactor projects. Translated from the English] Proekty
energeticheskikh reaktorov. Perevod s angliiskogo. Pod red.
S.A.Skvortsova. Moskva, Gos. energ. izd-vo, 1956. 31 p. (MLRA 10:1)
(Nuclear reactors)

RAZEVIG, D.V., redaktor; YEZHKOVA, V.V., redaktor; LARIONOV, G.Ye., tekhnicheskii redaktor

[Lightning protection for buildings and installations] Grozozashchita zdanii i sooruzhenii. Pod red. D.V.Razeviga. Moskva, Gosenerg. izd-vo, 1956. 19 p. (MLRA 9:11)
(Lightning protection)

YEZHKOVA, V.V.

KOMAROV, Boris Sergeyevich; [deceased]; YEZHKOVA, V.V., redaktor;
LEDNEVA, N.V., tekhnicheskii redaktor.

[Current supply and electrical equipment for wire communication]
Elektropitanie i elektrooborudovanie predpriatii provodnoi svyazi.
Izd. 3-e, perer. i dop. Moskva, Gos.izd-vo lit-ry po voprosam svyazi
i radio, 1956. 341 p. (MIRA 10:4)
(Telegraph) (Telephone)

SAKHAROV, Petr Vasil'yevich; YEKHKOV, V.V., redaktor; FRIDKIN, A.M.,
tekhnicheskiy redaktor;

[Technology of electric apparatus building] Tekhnologiya elektro-
apparatostroenia Izd.2-oe, perer. Moskva, Gos.energ.izd-vo. Part.1.

[Characteristics of electric apparatus building. Technology of
turning parts and magnetic circuits] Osobennosti elektroapparat-
ostroenia. Tekhnologiya tokovedushchikh detalei i magnitoprovodov.
1956. 320 p. (MLBA 9:5)

(Electric apparatus and appliances) (Electric engineering)

VENIKOV, Valentin Andreyevich; IVANOV-SMOLENSKIY, Aleksey Vladimirovich;
YEZHKOVA, V.V., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Use of models in designing electric systems] Fizicheskoe modelirova-
nie elektricheskikh sistem. Moskva, Gos. energ. izd-vo, 1956. 358 p.
(Electric engineering) (MIRA 9:12)

V. V. Yezhekov, V. V.
KARAYEV, B.M., professor, redaktor; YEZHEKOV, V.V., redaktor; BORONIN, K.P.,
tekhnicheskiy redaktor

[Fluorine organic compounds used as electric insulating materials.
Translations] Ftororganicheskie elektroizolyatsionnye materialy.
Perevody statei pod red. V.M.Tareeva. Moskva, Gos.energ. izd-vo,
1957. 62 p. (MIRA 10:9)
(Electric insulators and insulation)
(Fluorine organic compounds)

YE ZHKOV, V.V.

BURGSDORF, V.V., prof., doktor tekhn.nauk, red.; YEZHKOVA, V.V., red.;
LARIONOV, G.Ye., tekhn.red.

[High-voltage transmission lines; a collection of articles]
Lini elektroperedachi vysokogo napriazhenia; sbornik statei.
Pod red. V.V.Burgsdorfa. Moskva, Gos. energ. izd-vo. No.2.
1957. 61 p. (MIRA 11:5)

1. ORGRES, trust, Moscow.
(Electric lines)

YEZHKOV, V. V.

KRIKUNCHIK, A.B., redaktor; YEZHKOV, V.V., redaktor; MEDVEDEV, L.Ya.,
tehnicheskij redaktor

[380 kv transmission in Sweden; in 5 parts] Elektroperedacha 380
kv v Shvetsii; v piati vypuskakh. Perevod statei i dokladov pod
red. A.B.Krikunchika. Moskva, Gos.energ.izd-vo. Vol.2. [High-
tension apparatus. Transformers] Apparaty vysokogo napriazhenia.
Transformatory. 1957. 99 p. (MLBA 10:10)
(Sweden--Electric power distribution)

Yezhkov, V.V.

CHILIKIN, M.G., prof., red.; ZUSMAN, kand. tekhn nauk, red.; YEZHKOV, V.V.,
red.; LARIONOV, G.Ye., tekhn. red.

[Machine tool electric equipment. Pt.1. Electric machines and apparatus
for machine tools] Elektrooborudovanie metalloreshushchikh stankov.
Moskva, Gos. energ. izd-vo. Pt.1. Elektricheskie mashiny i apparaty
dlya metalloreshushchikh stankov. 1958. 87 p. (MIRA 11:7)
(Machine tools)

CHILIKIN, M.G., prof., red.; ZUSMAN, V.G., kand.tekhn.nauk, red.;
YEZHKOV, V.V., red.; BORUNOV, N.I., tekhn.red.

[Electric equipment of metal cutting machines] Elektroob-
rudovanie metallorezhushchikh stankov. Part 3 [Automatic
control of machines] Elektroavtomatika stankov. Moskva, Gos.
energ. izd-vo. 1958. 236 p. (MIRA 12:2)
(Machine tools) (Automatic control)

CHILIKIN, M.G., prof.; ZUSMAN, V.G., kand.tekhn.nauk; YEZHKOVA, V.V., red.;
BOBUNOV, N.I., tekhn.red.

[Electric equipment for metal-cutting machines] Elektrooborudovanie metallorazhushchikh stankov. Pt.2. [Controlled electric drive] Reguliruemyi elektroprivod. Moskva, Gos. energ. izd-vo. 1958. 175 p. (MIRA 12:1)
(Machine tools--Electric driving)

RYBIKIN, Boris Pavlovich; DEMKOV, Ye.D., red.; DOLGOV, A.M., red.;
YEZHKOVA, V.V., red.; SMIENOV, A.D., red.; USTINOV, P.I., red.;
FAYBERMAN, A.L., red.; LARIONOV, G.Ye., tekhn.red.

[Concealed electric wiring] Skrytye elektroprovodki. Moskva,
Gos.energ.izd-vo, 1959. 38 p. (Biblioteka elektromontera, no.9).
(MIRA 13:6)

(Electric wiring)

KARPOV, Fedor Fedorovich; DEMKOV, Ya.D., red.; DOLGOV, A.N., red.;
YEZHKOV, V.V., red.; SMIRNOV, A.D., red.; USTINOV, P.I., red.;
LARIONOV, G.Ye., tekhn.red.

[How to select the correct diameter of wires and cables]
Kak vybrat' sechenie provodov i kabelei. Moskva, Gos.energ.
izd-vo, 1959. 47 p. (Biblioteka elektromontera, no.1)
(MIRA 13:1)

(Electric conductors)

VENIKOV, V.A., prof., doktor tekhn.nauk, laureat Leninskoy premi, red.;
YEZHKOVA, V.V., red.; BORUNOV, N.N., tekhn.red.

[Questions on stability and control of electric systems; reports
of the International Conference on Electrical Systems, 1958]
Voprosy ustoychivosti i regulirovaniya elektricheskikh sistem;
doklady Mezhdunarodnoi konferentsii po elektricheskim sistemam
1958 g. Pod red. V.A.Venikova. Moskva, Gos.energ.izd-vo, 1959.
205 p. (MIRA 12:11)

(Electric engineering)

SEVAST'YANOV, Mitrofan Ivanovich; VASIL'YEV, A.A. , red.; DOLGOV, A.M.,
red.; YEZHKOVA, V.V., red.; SMIRNOV, A.D., red.; USTINOV, P.I.,
red.; TUMANOV, B.V., red.; VORONIN, K.P., tekhn.red.

[Safety engineering in performing rigging operations in the
installation of electric systems] Tekhnika bezopasnosti pri
proizvodstve takozhnykh rabot na montazhe energeticheskikh
ustanovok. Moskva, Gos.energ.izd-vo, 1960. 55 p. (Biblioteka
elektromontazh, no.34) (MIRA 14:4)
(Electric engineering--Safety measures)

STRAKHOV, Sergey Vladimirovich, doktor tekhn. nauk, (Moskva, E-250, Krasnokazarmennaya ulitsa, dom 14); YEZHKOVA, V.V., red.; BORUNOV, N.I., tekhn. red.

[Transient processes in electric networks operating with a.c. machinery] Perekhodnye protsessy v elektricheskikh tsepiakh, soderzhashchikh mashiny peremennogo toka. Moskva, Gos. energ. izd-vo, 1960. 246 p. (MIRA 14:5)

1. Vsesoyuznyy nauchnyy energeticheskiy institut (for Strakhov)
(Electric networks) (Electric machinery--Alternating current)

GLAZUNOV, Aleksandr Aleksandrovich [deceased]; GLAZUNOV, Aleksandr
Aleksandrovich; YEZHKOV, V.V., red.; LARIONOV, G.Ye., tekhn.red.

[Electric networks and systems] Elektricheskie seti i sistemy.
Izd.4., perer. i dop. Moskva, Gos.energ.izd-vo, 1960. 367 p.
(MIRA 14:3)

(Electric networks)

YEZHKOVA, V.V., inzh.; Frinimali uchastiye: TSOV'YANOV, A.N.; PIVOVAROV, V.V.

Effect of additional moments on the dynamic stability of an electric power transmission system containing hydrogenerators. Elektrichestvo no.11:35-41 N '61. (MIRA 14:11)

1. Moskovskiy energeticheskiy institut (for Yezhkov).
(Electric power distribution) (Turbogenerators)

KARPOV, Fedor Fedorovich; DEMKOV, Ye.D., red.; DOLGOV, A.N., red.;
YEZEKOV, V.V., red.; SMIRNOV, A.D., red.; USTINOV, P.I., red.;
BORUNOV, N.I., tekhn.red.

[How to test the possibility of connecting a short-circuited
electric motor to an electric network] Kak proverit' vozmozhnost'
podkliucheniia k elektricheskoi seti korotkozamknutogo elektrodvi-
gatelja. Moskva, Gos.energ.izd-vo, 45 p. (Biblioteka elektro-
montera, no.12). (MIRA 14:3)

(Electric motors) (Electric power distribution)

BULAVIN, Nikolay Petrovich; YEZHKOVA, V.V., red.; LARICHOV, G.Ye.,
tekh. red.

[Selenium rectifiers] Selenovye vypriamiteli. Moskva, Gos.
energ.izd-vo, 1961. 48 p. (Biblioteka elektromontera, no.42)
(MIRA 15:4)

(Electric current rectifiers) (Diodes)

YERMOLAYEV, Igor' Nikolayevich; YEZHKOV, V.V., red.; BORUNOV, N.I.,
tekhn. red.

[Magnetic a.c. starting devices] Magnitnye puskateli peremennogo
toka. Moskva, Gos. energ. izd-vo, 1961. 62 p. (Biblioteka
elektromontera, no.43) (MIRA 14:9)
(Electric contactors) (Electric relays)

ANISIMOVA, N.D.; VENIKOV, V.A., prof., doktor tekhn.nauk, laureat
Leninskoy premii; YEZHKOVA, V.V.; ZHUKOV, L.A.; NADEZHDIR, S.V.;
ROZANOV, M.N.; FEDOROV, D.A.; TSOV'YANOV, A.N.; LARIONOV, G.Ye.,
tekh.red.

[Examples and illustrations of transient processes in electrical
systems] Perekhodnye protsessy elektricheskikh sistem v pri-
merakh i illiustratsiyakh. By N.D.Anisimov i dr. Moskva, Gos.
energ.izd-vo, 1962. 383 p. (MIRA 15:4)

1. Kafedra "Elektricheskiye sistemy" Moskovskogo energeticheskogo
instituta (for all except Laticnov). 2. Zaveduyushchiy kafedroy
"Elektricheskiye sistemy" Moskovskogo energeticheskogo instituta
(for Venikov).
(Transients (Electricity)) (Electric networks)

S/105/62/000/009/001/001
E140/E435

AUTHORS: Venikov, V.A., Doctor of Technical Sciences,
Yezhkov, V.V., Engineer, Strakhov, S.V., Doctor of
Technical Sciences, Professor (Moscow)

TITLE: The calculation of electromechanical transients in
electric power systems using digital computers

PERIODICAL: Elektrichestvo, no.9, 1962, 7-14

TEXT: The problem treated by the authors is the calculation of dynamic stability, short-circuit current variation and phase swinging, asynchronous operation related processes, using digital computers. The use of digital computers permits a number of factors, which had to be neglected in manual calculations, to be taken into account. Such factors are the forces due to aperiodic components of the stator currents and the periodic component of rotor current, power losses in the rotor and stator resistances. The work was carried out on a digital computer "of the BESM (BESM) type", and compared with the results obtained on an analogue model of the same system. The basic element studied in the present work was a single machine connected

Card 1/3

S/105/62/000/009/001/001

The calculation of electromechanical .. E140/E435

to constant potential busbars. The mathematical starting point is a system of nonlinear integro-differential equations. Periodic components are eliminated by transformation to a coordinate system rotating with the machine under study. Several possibilities exist for the treatment of systems of several machines. Each machine can have its own local set of rotating coordinates, while the lines connecting them can either be related to one of the terminal sets of rotating coordinates or to a further fixed set. In establishing the equations, the following simplifying assumptions were made:

1. The magnetic fields of each winding are distributed sinusoidally along the circular air gap, to the neglect of higher space harmonics.
 2. Reluctance variations are neglected.
 3. Hysteresis, saturation and eddy currents (steel losses) are neglected.
 4. The expressions for the winding inductances are simplified by series expansion and retention of only the first or first two terms.
 5. The field and damping windings are considered to be coaxial.
- With these assumptions and restrictions a system of two generators connected by a

Card 2/3

The calculation of electromechanical .. S/105/62/000/009/001/001
E140/E435

transmission line was studied under short-circuit conditions from the instant of metallic contact through the recovery period after disconnection of the short-circuited segment. The results, compared with manual and with analogue computations, show the following:

1. The additional forces taken into account in the computation here are required only for machines close to the point of short circuit. The simplified formulae are adequate for machines further away.
2. The program, which was developed in stages by comparison with the results of analogue computations, appears adequate to the problem.
3. A simplified method, using effective currents, with the additional forces referred to the prime mover, gives sufficiently accurate results compared to the method using instantaneous current values and can be recommended for engineering calculations.
4. The neglect of iron losses does not substantially affect the accuracy of transient calculations for the first hunting cycle. There are 8 figures.

SUBMITTED: May 17, 1962
Card 3/3

YEZHNEV, V.V., inzh.

Study of the braking of synchronous turbogenerators in the presence of external short circuits. Izv. vys. ucheb. zav.; energ. 5 no.7:34-39 J1 '62. (MIRA 15:7)

1. Noakovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy elektricheskikh sistem. (Turbogenerators)

VENIKOV, V.A., doktor tekhn.nauk, prof. (Moskva); YEZHKOVA, V.V., inzh.
(Moskva); STRAKHOV, S.V., doktor tekhn.nauk, prof. (Moskva)

Use of digital computers in the calculation of transient
processes in electrical systems. Elektrichestvo no.9:7-14
S '62. (MIRA 15:9)

(Transients (Electricity))
(Electronic digital computers)
(Electric networks)

ARKHIPOV, N.K.; YEZHKOVA, V.V., red.

[Voltage modes in electric power distribution networks; a lecture] Rezhimy napriazhenii v elektricheskikh raspredelitel'nykh setiakh; lektsiia. Moskva, Vses. zaochnyi energ. in-t, 1964. 131 p. (MIRA 18:3)

ALEKSEYEVA, G.Ye., kand. tekhn. nauk, dots.; MELESHKINA, L.P., dots., kand. tekhn. nauk; BALUYEV, V.K., inzh.; RAMDAS, A.M., prof., doktor tekhn. nauk; VEZHNIKOV, V.A., prof., doktor tekhn. nauk; YEZHNIKOV, V.V., kand. tekhn. nauk; ANISIMOVA, N.D., dots., kand. tekhn. nauk; GANTMAN, S.A., kand. khim. nauk; GLAZUNOV, A.A., dots., kand. tekhn. nauk; GOGUA, L.K., inzh.; GREBENNICHENKO, V.T., inzh.; GRUDINSKIY, P.G., prof.; GORFINKEL', Ya.M., inzh.; ZVEZDIN, A.L., inzh.; KAZANOVICH, G.Ya., inzh.; KNYAZEVSKIY, B.A., dots., kand. tekhn. nauk; KOSAREV, G.V., dots., kand. tekhn. nauk; MESSERMAN, S.M., kand. tekhn. nauk, dots.; KOKHAN, N.D., inzh.; KUVAYEVA, A.P., dots., kand. tekhn. nauk; SOKOLOV, M.M., dots., kand. tekhn. nauk; LASHKOV, F.P., dots., kand. tekhn. nauk; LAZIN, A.I., inzh.; YUDIN, F.I., inzh.; LIVSHITS, A.L., kand. tekhn. nauk; METEL'TSIN, P.G., inzh.; NIKRASOVA, N.M., dots., kand. tekhn. nauk; OL'SHANSKIY, N.A., dots., kand. tekhn. nauk; POLEVAYA, I.V., dots., kand. tekhn. nauk; POLEVOY, V.A., dots., kand. tekhn. nauk [deceased]; RAZEVIC, D.V., prof., doktor tekhn. nauk; RAKOVICH, I.I., inzh.; SOLDATKINA, L.A., dots., kand. tekhn. nauk; TREMBACH, V.V., dots., kand. tekhn. nauk; FEDOROV, A.A., prof., kand. tekhn. nauk; FINGER, L.M., inzh.; CHILIKIN, M.G., prof., doktor tekhn. nauk, glav. red.; ANTIK, I.V., inzh., red. GOLOVAN, A.T., prof., red.; PETROV, G.N., prof., red.; FEDOSEYEV, A.M., prof., red.

(Continued on next card)

ALEKSEYEVA, G.Ye.--- (continued). Card 2.

[Electrical engineering manual] Elektrotekhnicheskii
spravochnik. Pod obshchei red. A.T. Golovana i dr. Moskva,
Energia. Vol.2. 1964. 758 p. (MIRA 17:12)

1. Moscow. Energeticheskii institut. 2. Moskovskiy energo-
ticheskii institut (for Golovan, Grudinskiy, Petrov,
Fedoseyev, Chilikin, Venikov). 3. Chlen-korrespondent AN
SSR (for Petrov).

YEZHKOVA, A. G.

Yezhkova, A. G. "Results of work in restorative surgery for disabled soldiers of the Great Fatherland War at the Republic hospital," (Tashkent), Sbornik trudov Nauch.-issled. in-ta ortopedii, travmatologii i protazirovaniya (M-vo zdravookhraneniya Uz SSR), Vol. I, 1948, p. 33-46

SO: U-4934, 29 Oct. 53, (Letopis 'Zhurnal 'nykh Stateli, No. 16, 1949).

YEZHKOVA, A. G.

27982. YEZHKOVA, A. G. -- Lecheniye lozhnykh suslavov i defektov kostey ognestrel'nogo proiskhozhdeniya. Trudy pervoy nauch. MezhrEsp. Konf-tsi' po lecheniyu invalidov otechestv. Vojny v sred. Azii. Tashkent, 1949, S. 129-39.

SO: Letopis' Zhurnal'nykh Statey. Vol. 37, 1949.

SOURCE: RUSSIAN, zhurnal khimii, Abs. 9167

57

Authors: Chernov, M.D.; Mikhailov, A.I.; Korobova, A.V.; Livshits, S.I.

Journal: RUSSIAN JOURNAL OF CHEMISTRY

Journal Info: Tr. po khimii i khim. tekhnol., (Sov'kiy), vy*1. 1, 1962, 159-164

TOPIC TAGS: red phosphorus; purification; vacuum distillation

The process of purification of technical commercial red phosphorus from impurities of mineral acids in small concentrations was studied. The non-equivalent action of 3 and 5% HNO₃, H₂SO₄, and HCl or their mixtures, taken in equal amounts, was demonstrated at 70-80°C. The treatment of red phosphorus with 3% HNO₃ and 5% H₂SO₄ followed by treatment with distilled water and subsequent vacuum distillation resulted in a high content of the impurities in the residue. The results of vacuum distillation of

Card 1/2

The process of vacuum distillation of

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... mixture of acid, in glass apparatus ...
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of two to three distillations. Spectrally pure phosphorus is obtained by the method of four distillations. No influence of the depth of the vacuum in the process of distillation is observed. The quality of glass on the quality of phosphorus is not observed. Spectrally pure phosphorus is obtained.

Page 10

YEZHKOVA, D.

USSR/Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93023.

Author : Golub, A., Forman, Z., Yezhkova, D.

Inst :

Title : Development of Thermogenesis in Young Pigs.

Orig Pub: Za sots. s.-kh. nauku, 1958, A7, No 1, 73-82.

Abstract: O₂ consumption in 14 young pigs was measured by the Krog method from the day of their birth to the age of 1 month. Up to the age of 6 days the pigs did not react to a lowering of the temperature of the environment from 23 ± 1 degrees to 3 ± 1 degrees with an increased consumption of O₂. With a lowering of the temperature for 30 minutes their body temperature fell about 1.8 degrees. The O₂ consumption with

Card : 1/2

DMITRIYEVSKIY, S. (Leningrad); YEZHOVA, D. (Leningrad); ARSHAVSKIY, M.,
sovetsnik yustitsii (Tyumen'); GALEYEV, A.

Editor's mail. Sov. torg. 36 no.3:42-43 Mr '63. (MIRA 16:3)

1. Nachal'nik Zheleznodorozhnogo upravleniya rabochego snabzheniya
Yuzhno-Ural'skoy zheleznoy dorogi, Chelyabinsk.
(Retail trade) (Railroads--Dining-car service)

S/191/60/000/004/009/015
B016/B058

AUTHORS: Yezhkova, V. S., Militskova, Ye. A., Sokolov, A. D.

TITLE: Application of Organic Glass in Illumination Engineering
and of Other Materials for the Production of Illumination
Devices

PERIODICAL: Plasticheskiye massy, 1960, No. 4, pp. 42-45

TEXT: The authors describe plastic light diffusers of various designs and shapes, as well as colored signal glasses and lamps. They mention the production processes used and discuss in detail the application of organic glass in illumination engineering. Addition of low-molecular polystyrene (molecular weight: 10,000 - 18,000) is recommended for obtaining a uniformly semitransparent opal glass. The manufacturing method of this polystyrene was elaborated at the central laboratory of the Kuskovskiy khimicheskii zavod (Kuskovo Chemical Plant). A glass of this type with cross-linked structure and increased heat resistance was developed at the "Karbolit" Plant. The thermosetting paste for its manufacture was developed at the НИИПП (Scientific Research Institute of Plastic Products) from

Card 1/2

Application of Organic Glass in Illumination
Engineering and of Other Materials for the
Production of Illumination Devices

S/191/60/000/004/009/015
B016/B058

acrylates and polyfunctional cross-linking agents. Pastes of this type were elaborated at the "Karbolit" Plant on the basis of other formulas (TC-3, TC-4 (TS-3, TS-4)). Products of any color and transparency can be made from these acrylate pastes. They have a strong, glossy surface and withstand temperatures of 120-150°C without changes in shape and warping. Pressed products from TS-3 and TS-4 have a sufficient mechanical strength. They get brittle at room temperature due to a higher content of cross-linking agents, but remain elastic and strong in a heated state. Illuminating devices, light-diffusing ceilings, and signal glasses can be produced from centrifugally cast material. For this purpose the authors recommend polystyrene, the copolymers MC (MS) and MCH (MSN), acetobutyrate cellulose etrol, acetyl cellulose etrol, polypropylene, and other cast materials. Finally, they mention that the newly developed heat-resistant plastics ЭЦ-12-A (ETS-12A) and ЭЦ-30A (ETS-30A) of the "Karbolit" Plant, based on acetobutyrate cellulose and plasticized with polymers, show many advantages (Fig. 3). There are 3 figures and 3 tables.

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S/191/62/000/011/004/019
B101/B186

AUTHORS: Militskova, Ye. A., Sokolov, A. D., Yezhkova, Ye. S.

TITLE: Molding materials based on polyester acrylates

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 10-12

TEXT: Molding materials ~~TMCF~~-11 (TMCF-11), ~~MCF~~-9 (MGF-9), and ~~MAQ~~-2 (MDF-2) polyester acrylates and powder fillers (quartz powder, talc, chalk, wood dust, etc.) are reported upon. Glass fiber used as a filler (diameter 7.3 μ , tensile strength 262 g, length 1.5-2 cm) was made water-repellent with Velan or with the preparation 246H (246 N). A paste of benzoyl peroxide and dibutyl phthalate 1:1 (2 parts by weight per 100 parts of polyester) was used as catalyst. The rate of curing and the mechanical, thermal, and electrical properties were tested. Results: (1) Molding materials containing quartz powder, talc, or fluorite as fillers needed to be worked at once, whereas materials filled with wood dust or glass fiber remained workable for 6 months. (2) Materials based on TMGF-11 with a powder filler were heat-resistant to 200°C but had an impact strength of only 4.2-4.4 kg·cm/cm². Materials based on MGF-9 or

13

Card 1/2

Molding materials based on ...

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B101/B186

MDF-2 with a powder filler showed an impact strength of 10.3-14.5 kg·cm/cm² but a Martens heat resistance of only 44-54°C. (3) Molding material based on TMGF-11 and filled with glass fiber was heat-resistant to 200°C and its hardness was 24.5 kg/mm²; but it was not as strong, as the other two molding materials. MGF-9 or MDF-2 filled with glass fiber gave a heat resistance of 45-80°C and their impact strength was increased to 100 kg·cm/cm² by using hydrophobic glass fiber. (4) For TMGF-11 materials, the rate of curing and the shear strength were slightly higher than for MGF-9 and MDF-2 materials. Wood dust reduced the shear strength, glass fiber raised it. (5) Increase of the molding temperature from 130 to 170°C, and of the benzoyl peroxide admixture from 0.1 to 1.0% accelerated hardening, which was virtually finished within 1.5-2 min for MDF-2 material. (6) Only glass-fiber filled products withstood the break voltage shock test at -50°C for 3 hrs, at room temperature for 2 hrs, and at 130°C for 2 hrs. (7) The breakdown voltage was 20-25 kv/mm for all products investigated. The most suitable of these materials was pressed into parts for use in the automotive industry (distributor caps) at 130-135°C, a pressure of 60 kg/cm² and a molding time of 4-5 min. There are 2 figures. AB

Card 2/2

BLEGA, O.; ENGEL'BERT, O.; YEZHKOVA, Z.; SHRAMKOVA, Ya.

Importance of autoimmunization reactions in the diagnosis of
diseases of the thyroid gland. Probl. endok. i gorm. 11 no.4:
21-25 J1-Ag '65. (MIRA 18:11)

1. 3-ya terapevticheskaya klinika, Praga.

YEZHKOVA, Z. I.

Category: USSR / Physical Chemistry - Crystals

B-5

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29673

Author : Zhdanov G. S., Umanskiy M. M., Varfolomeyeva L. A., Yezhkova
Z. I., Zolina Z. K.

Inst : not given

Title : Roentgenographic Determination of Unit Cells and Spatial Groups of
Piezoelectric Crystals: $\text{KLiC}_4\text{H}_4\text{O}_6 \cdot \text{H}_2\text{O}$, $\text{NH}_4\text{LiC}_4\text{H}_4\text{O}_6 \cdot \text{H}_2\text{O}$, $\text{NaHC}_4\text{H}_4\text{O}_6$
 H_2O and $(\text{NH}_4)_2\text{C}_4\text{H}_4\text{O}_6$.

Orig Pub: Kristallografiya, 1956, 1, No 3, 271-273

Abstract: Precise measurements of lattice parameters were carried out on mono-crystals by means of roentgenograms obtained with a RKU-114 camera, without thermostatic controls, at room temperature; Fedorov groups were determined from kforograms. For $\text{KLiC}_4\text{H}_4\text{O}_6 \cdot \text{H}_2\text{O}$ (I) a 7.839, b 14.318, c 6.326 kX; β 2.01; $Z = 4$; F.gr. $P2_12_12_1$; $\text{NH}_4\text{LiC}_4\text{H}_4\text{O}_6 \cdot \text{H}_2\text{O}$ (II) 7.860, 14.615, 6.414 kX; 1.73; 4; $P2_12_12_1$; $\text{NaHC}_4\text{H}_4\text{O}_6 \cdot \text{H}_2\text{O}$ 8.663, 10.580, 7.230 kX; 4; $P2_12_12_1$; $(\text{NH}_4)_2\text{C}_4\text{H}_4\text{O}_6$ 7.067, 6.116, 8.790 kX; β $92^\circ 25'$, 1.608; 2; $P2_1$. Crystals of I and II are isomorphous. Lattice parameters of II were determined twice (RZhKhim, 1955, 39570).

Card : 1/1

-13-

70-3-2-18/26

AUTHORS: Yezhkova, Z.I., Zhdanov, G.S. and Umanskiy, M.M.

TITLE: X-ray Determination of the Thermal Expansion Coefficients of Guanidine Aluminium Sulphate Hexahydrate - $C(NH_2)_3[Al(H_2O)_6] \cdot [SO_4]_2$ - (GASH) (Rentgenograficheskoye opredeleniye koeffitsiyentov termicheskogo rasshireniya guanidin-alyuminiy-sul'fata gekzagidrata - $C(NH_2)_3[Al(H_2O)_6] \cdot [SO_4]_2$)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 2, pp 231-232 (USSR)

ABSTRACT: The lattice parameters of GASH at 25 °C were found to be $a=11.7159 \pm 0.0007$ KX, $c=8.9335 \pm 0.0007$ KX and the coefficients of thermal expansion were determined as for the a axis, $\alpha_{perp.} = 10.0 \pm 0.4 \times 10^{-6}$ per deg. Cfor the c axis, $\alpha_{par.} = 93.3 \pm 1.0 \times 10^{-6}$ per deg. C

The expansion was measured over the range 25-55 °C. The 13.0.0. and the 009 reflections were used with Cu and Fe radiations, Card1/1 respectively. There are 1 figure and 2 Soviet and 2 English refs.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University im. M.V. Lomonosov)

SUBMITTED: July 3, 1957.

AUTHORS: ^{SOV/70-4-2-24/36} Yezhkova, Z.I., Zhdanov, G.S. and Umanskiy, M.M.

TITLE: The Thermal Expansion of Crystals of Triglycinesulphate in the Region of Their Ferro-electric Transition (Termicheskoye rasshireniye kristalla triglitsinsul'fata v oblasti segnetoelektricheskogo perekhoda)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 2, pp 249-253 (USSR)

ABSTRACT: $(\text{CH}_2\text{NH}_2\text{COOH})_3\text{H}_2\text{SO}_4$ is monoclinic with $a = 9.15$, $b = 12.69$, $c = 5.73 \pm 0.03 \text{ \AA}$, $\beta = 105^\circ 40' \pm 20'$ with space group $P2_1$ below the Curie point at 47° and $P2_1/m$ above. $Z = 2$ $d_{\text{obs}} = 1.69$ and the ferro-electric axis is $[010]$ (according to Wood and Holden - Ref 6). Here, the thermal expansion of single crystals has been measured from X-ray single-crystal oscillation photographs. The most accurate values were obtained from $d_{900}(\text{FeK}_\alpha)$ with $\theta \sim 81^\circ$, $d_{007}(\text{Cu K}_\alpha)$ with $\theta \sim 78^\circ$, $d_{505}(\text{Ni K}_\alpha)$ with $\theta \sim 81^\circ$ and $d_{0,14,0}(\text{Co K}_\alpha)$ with $\theta \sim 85^\circ$. Absorption corrections (for the 0.4 mm dia

Card1/3

SO/70-4-2-24/36

The Thermal Expansion of Crystals of Triglycinesulphate in the Region of Their Ferro-electric Transition

crystal were not applied. The accuracy was estimated at ± 0.0015 kX. β was calculated. The components of the thermal expansion tensor (principal components) were calculated as follows, where φ is the angle of α_{11} to the a axis of the crystal. At 25°C $\alpha_{11} = -37$, $\alpha_{22} = 5$, $\alpha_{33} = 142$ (in each case $\text{deg}^{-1} \times 10^{-6}$) and $\varphi = 22^\circ$. At 42.5° $\alpha_{11} = -20$, $\alpha_{22} = 36.5$, $\alpha_{33} = 119$ and $\varphi = 7^\circ 20'$. Between 51 and 75° $\alpha_{11} = 40$, $\alpha_{22} = 64$, $\alpha_{33} = -12.5$ and $\varphi = 5^\circ 40'$. The cell volume changes smoothly over the whole temperature range. It is concluded that the phase transition is of the second order and that a marked redistribution of the hydrogen bonds parallel to the ac plane occurs at the ferro-electric transition. There are 4 figures, 3 tables and 7 references, 2 of which are Soviet, 4 English and 1 international.

Card2/3

SOV/70-4-2-24/36
The Thermal Expansion of Crystals of Triglycinesulphate in the
Region of Their Ferro-electric Transition

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova (Moscow State University imeni
M.V. Lomonosov)

SUBMITTED: October 13, 1958

Card 3/3

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SOV/70-4-5-16/36

AUTHORS: Yezhkova, Z. I., Zhdanov, G. S., Umanskiy, M. M.

TITLE: An X-Ray Diffraction Method for the Determination of the Thermal Expansion Tensors of the Crystals of Low Symmetry

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 5, pp 723-726 (USSR)

ABSTRACT: If the principal expansion directions, that determine the diagonal tensor α_{11} , are the orthogonal coordinate axes X' , Y' , Z' , the thermal-expansion coefficient in i direction is described by

$$\Delta_i = \alpha_{11}c_{1i}^2 + \alpha_{22}c_{2i}^2 + \alpha_{33}c_{3i}^2 \tag{3}$$

where c_{1i} , c_{2i} , c_{3i} are direction cosines of i . In cubic, tetragonal, hexagonal, rhombohedral and orthorhombic crystals, the expansion coefficients along one, two, or three crystallographic axes suffice to determine the tensor. In monoclinic crystals only

Card 1/6

An X-Ray Diffraction Method for the Determination of the Thermal Expansion Tensors of the Crystals of Low Symmetry

75994
SOV/70-4-5-16/36

$[010]$ coincides with one of the expansion tensor components, and in triclinic crystals, none. Consequently, the determination of the thermal expansion tensor in monoclinic crystals requires the data on the expansion of interplanar spacings of 4 different hkl , more conveniently of d_{010} and of three spacings of d_{hkl} type, and in triclinic crystals of 6 different spacings, more conveniently of d_{100} , d_{010} , d_{001} , d_{110} , d_{101} , d_{011} . In a coordinate system X, Y, Z of which the first two are parallel to $[100]$ and $[010]$, respectively, and the third is normal to (010) , the thermal expansion of a monoclinic crystal in the direction parallel to (010) and under angle φ to the X axis is described by

$$\Delta_{\varphi} = a_{11} \cos^2 \varphi + a_{33} \sin^2 \varphi + 2a_{13} \cos \varphi \sin \varphi. \quad (2a)$$

Here, the values are determined by the following three

Card 2/6

An X-Ray Diffraction Method for the Determination of the Thermal Expansion Tensors of the Crystals of Low Symmetry

75994
SOV/70-4-5-16/36

equations:

$$2\alpha_{11} = a_{11} + a_{33} + \frac{a_{11} - a_{33}}{\cos 2\psi}; \quad 2\alpha_{33} = a_{11} + a_{33} - \frac{a_{11} - a_{33}}{\cos 2\psi};$$

$$\tan 2\varphi = 2\alpha_{13}; (a_{11} - a_{33})$$

where ψ is the angle between α_{11} and X-axis. The orthogonal coordinate axes X, Y, Z for triclinic crystals must be chosen as follows: X coincides with the reciprocal-lattice axis a^* , Y is in the a^*b^* plane, and Z is normal to that plane and coincides with c-axis. Referred to this set of coordinates, the thermal-expansion tensor is described by the expression:

$$a_{ik} = \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{12} & a_{22} & a_{23} \\ a_{13} & a_{23} & a_{33} \end{vmatrix} \quad (1)$$

Card 3/6

An X-Ray Diffraction Method for the Determination of the Thermal Expansion Tensors of the Crystals of Low Symmetry

75994
SOV/70-4-5-16/36

the 6 subscripts in which are determined by the thermal expansions of the mentioned 6 interplanar spacings as follows:

$$\Delta_{100} = \alpha_{11},$$

$$\Delta_{010} = a_{11} \cos^2 \gamma^* + a_{22} \sin^2 \gamma^* + 2a_{12} \cos \gamma^* \sin \gamma^*,$$

$$\Delta_{110} = a_{11} \cos^2 (a^* H_{110}) + a_{22} \sin^2 (a^* H_{110}) + 2a_{12} \sin (a^* H_{110}) \cos (a^* H_{110}),$$

$$\Delta_{001} = a_{11} \cos^2 \beta^* + a_{22} \cos^2 (c^* Y) + a_{33} \cos^2 (c^* H_{001}) + 2a_{12} \cos \beta^* \cos (b^* Y) + 2a_{13} \cos \beta^* \cos (c^* c) + 2a_{23} \cos (c^* Y) \cos (c^* c),$$

$$\Delta_{101} = a_{11} \cos^2 (a^* H_{101}) + a_{22} \cos^2 (H_{101} Y) + a_{33} \cos^2 (H_{101} c) + 2a_{12} \cos (a^* H_{101}) \cos (H_{101} Y) + 2a_{13} \cos (H_{101} a^*) \cos (H_{101} c) + 2a_{23} \cos (H_{101} Y) \cos (H_{101} c), \quad (5)$$

$$\Delta_{011} = a_{11} \cos^2 (H_{011} a^*) + a_{22} \cos^2 (H_{011} Y) + a_{33} \cos^2 (H_{011} c) + 2a_{12} \cos (H_{011} a^*) \cos (H_{011} Y) + 2a_{13} \cos (H_{011} a^*) \cos (H_{011} c) + 2a_{23} \cos (H_{011} Y) \cos (H_{011} c).$$

Card 4/6

An X-Ray Diffraction Method for the Determination of the Thermal Expansion Tensors of the Crystals of Low Symmetry

75994
SOV/70-4-5-16/36

H_{hkl} means reciprocal-lattice vector; α^* , β^* , γ^* and other angles can be expressed in terms of the crystallographic interaxial angles according to known equations. The transformation of the found tensor a_{ik} into the diagonal tensor Q_{1k} , i.e. reference of the tensor to the set of X', Y', Z' axes, is achieved using

$$D(\alpha) = -\alpha^3 + S_1\alpha^2 - S_2\alpha + S_3, \quad (6)$$

$$S_1 = a_{11} + a_{22} + a_{33},$$

$$S_2 = \begin{vmatrix} a_{11} & a_{12} \\ a_{12} & a_{22} \end{vmatrix} + \begin{vmatrix} a_{11} & a_{13} \\ a_{13} & a_{33} \end{vmatrix} + \begin{vmatrix} a_{22} & a_{23} \\ a_{23} & a_{33} \end{vmatrix},$$

$$S_3 = \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{12} & a_{22} & a_{23} \\ a_{13} & a_{23} & a_{33} \end{vmatrix}.$$

There are 3 figures; and 5 references, 4 Soviet, 1 U.K. The U.K. reference is: Y. A. Wooster, Textbook on Crystalphysics, Oxford, 1938.

Card 5/6

An X-Ray Diffraction Method for the Determination of the Thermal Expansion Tensors of the Crystals of Low Symmetry

75994
SOV/70-4-5-16/36

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova)

SUBMITTED: May 21, 1959

Card 6/6

YEZHKOV, Z. I.

Cand Phys-Math Sci - (diss) "X-ray determination of the tensor of thermodynamic expansion of several ferroelectric crystals." Moscow, 1961. 12 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin and Order of Labor Red Banner State Univ imeni M. V. Lomonosov); 200 copies; price not given; (KL, 10-61 sup, 204)

KAZANSKIY, V.B.; YEZHKOVA, Z.I.; LYUBARSKIY, A.G.; VOYEVODSKIY, V.V.;
IOFFE, I.I.

Electron paramagnetic resonance study of the structure of
vanadium-molybdenum oxide catalysts. *Kin.i kat.* 2 no.6:862-866
N-D '61. (MIRA 14:12)

1. Institut khimicheskoy fiziki AN SSSR i Institut organicheskikh
poluproduktov i krasiteley imeni K.Ye. Voroshilova.
(Catalysts--Spectra)

28293
S/076/61/035/010/012/015
B106/B110

С. 1190
AUTHORS:

Ioffe, I. I., Yezhkova, Z. I., Lyubarskiy, A. G. (Moscow)

TITLE:

Catalytic activity of mixed vanadium oxide catalysts in vapor phase oxidation of organic compounds

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 10, 1961, 2348 - 2351

TEXT: The authors studied the catalytic activity of vanadium oxide, molybdenum oxide, and vanadium oxide - chromium oxide catalysts in the vapor phase oxidation of benzene and that of vanadium oxide, molybdenum oxide, titanium oxide, phosphorus oxide catalysts in the vapor phase oxidation of furfural to maleic anhydride. The authors tempted to clarify the mechanism of the activating effect of oxide additions of other elements on the catalytic activity of vanadium pentoxide. The catalysts for furfural oxidation were produced by aspirant V. A. Slavinskaya (In-t organicheskogo sinteza AN Latv. SSR (Institute of Organic Synthesis of the Academy of Sciences Latviyskaya SSR)). The catalysts were analyzed by X-ray diffraction, moreover, catalytic activity and selectivity of the catalysts were determined in continuously circulating and in continuous

Card 1/4

28293 S/076/61/035/010/012/015
B106/B110

Catalytic activity of...

flow plants. The authors thank V. V. Voyevodskiy and V. B. Kazanskiy for taking the epr spectra for part of the catalysts. The X-ray diffraction phase analyses were carried out in cameras of type PKA (RKD) with CrK α -radiation. The specimens were produced by evaporation of a mixture of solutions of corresponding oxalates and ammonium salts with subsequent heating to 400°C. Figs. 1 and 2 show the change of catalytic activity of the examined catalysts with the composition in the oxidation of benzene to maleic anhydride. A comparison of the determined phase compositions and the epr spectra with the activity of studied catalysts show that the increase of catalytic activity of mixed vanadium oxide catalysts is due to the increase of concentration of defects in the V₂O₅ lattice. These defects are caused by molybdenum, chromium or titanium atoms penetrating into the V₂O₅ lattice in the formation of solid solutions. When the tested V₂O₅-MoO₃ catalyst is annealed at high temperatures, a considerable deactivation occurs, since the oversaturated solid MoO₃ solution existing prior to annealing changes over into state of equilibrium, then having less MoO₃ and thus also fewer lattice defects. It is, therefore, probable that

Card 2/4

28293

B/076/61/035/010/012/015
B106/B110

Catalytic activity of...

pure V_2O_5 can be successfully used as catalyst when the compound to be oxidized itself, e. g. naphthalene, causes a considerable concentration of defects in the V_2O_5 lattice (by forming a non-stoichiometric excess of vanadium). In other cases, however, oxides of other elements which form solid solutions with V_2O_5 must be added to vanadium pentoxide in order to create the required concentration of defects. Concentration and character of defects and thus also catalytic activity and selectivity of the catalyst can be varied within wide limits by variation of quantity and kind of additions. In order to substantiate the mentioned rules, further papers will study connections between activity and selectivity of vanadium oxide catalysts, on the one hand, and concentration of lattice defects, on the other hand. Also the crystallographic characteristics of oxides to be added to V_2O_5 will be determined. There are 2 figures, 1 table, and 7 references: 4 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: K. Tarama, Sh. Teranishi, T. Vasui, J. Chem. Soc. Japan. Industr. Chem. Sect., 60, 1222, 1957. X

Card 3/4

28293

S/076/61/035/010/012/015
B106/B110

Catalytic activity of...

ASSOCIATION: Institut organicheskikh poluproduktov i krasiteley (Institute of Organic Semifinished Products and Dyes)

SUBMITTED: March 4, 1960

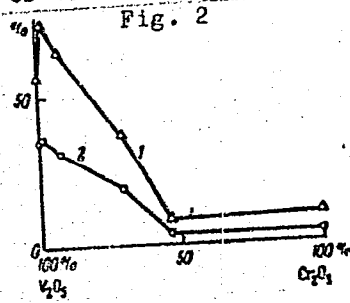
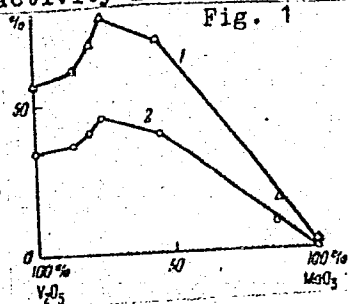
Fig. 1. Alteration of activity and selectivity of vanadium-molybdenum catalysts as dependent on the MoO_3 content

Legend: (1) Total conversion of C_6H_6 , (2) conversion of C_6H_6 into $C_4H_2O_3$.

Fig. 2. Alteration of activity and selectivity of vanadium-chromium catalysts as dependent on the Cr_2O_3 content

Legend: (1) Total conversion of C_6H_6 , (2) conversion of C_6H_6 into $C_4H_2O_3$.

Card 4/4



IOFFE, I.I.; YEZHKOVA, Z.I.; LYUBARSKIY, A.G.

Phase composition of mixed vanadium catalysts for the oxidation
of aromatic hydrocarbons. Kin.i kat. 3 no.2:194-200 Mr-Ap
'62. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley imeni Voroshilova.
(Hydrocarbons) (Oxidation) (Vanadium oxides)

ACCESSION NR: AP4012976

S/0020/64/154/004/0903/0906

AUTHORS: Ioffe, I.I.; Yezhkova, Z.I.; Lyubarskiy, A.G.

TITLE: Concerning the mechanism of organic compounds oxidation over solid nonmetallic catalysts

SOURCE: AN SSSR. Doklady*, v. 154, no. 4, 1964, 903-906

TOPIC TAGS: solid nonmetallic catalyst, oxidation catalyst, pi catalyst, sigma catalyst

ABSTRACT: The present work is a discussion and derivation of laws based on the experimental work by A.G. Lyubarski (Candidate thesis, Moscow, 1963) and constitutes, therefore, the conclusions of the thesis. Oxidation of organic compounds consists of the following stages: 1. electron transition from reagent to catalyst (chemsorption), 2. Electron transmission from donor (reagent) to acceptor (oxygen), 3. incorporation of electrons by the oxygen molecule (chemsorption of O) forming O-ion, and 4. Interaction of organic ion with the O-ion and the formation of the oxidation product. The

Card 1/2

ACCESSION NR: AP4012976

first stage is a complex formation with filling of d-orbits of cations. The capacity of catalysts to form π -complexes on their surface in contact with hydrocarbons having double and triple bonds depends on the acceptor capacity of the catalyst. Stage 2 is achieved by straight interaction of electrons with oxygen, recharging of ions and zonal conductivity (in π -activated catalysts). Stages 3 and 4 are not discussed in the article, which concludes with some recommendations on how to synthesize selective σ -activating catalysts which do not destroy the double C=C bond during oxidation. Orig. art. has: 2 figures, 1 formula, no tables.

ASSOCIATION: Nauchno issledovatel'skiy institut organicheskikh poluproduktov i krasiteley (Scientific Research Institute of Intermediates and Dyes)

SUBMITTED: 01Aug63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: CH

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Card 2/2