BALANDIN, A.A.; KHIDEKEL', M.L.; PATRIKEYEV, V.V.

Effect of the structure of compounds on the kinetics and direction of their catalytic hydrogenation. Part 1: Conjugation energy and the kinetics of hydrogenation of benzene, pyridine, and pyrrole. Zhur.ob.khim. 31 no.5:1416-1423 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.
(Benzene) (Pyridine) (Pyrrole) (Hydrogenation)

BALANDIN, A.A.; KHIDEKEL', M.L.; PATRIKEYEV, V.V.

Effect of the structure of compounds on the kinetics and direction of their catalytic hydrogenation. Part 2: Hydrogenation kinetics of furan, thiophene, and ferrocene on rhodium. Zhur.ob.khim. 31 no.6:1876-1882 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Furan) (Thiophene) (Iron) (Hydrogenation)

S/062/62/000/001/011/015
B101/B110

AUTHORS: Patrikeyev, V. V., Kozarenko, T. D., and Balandin, A. A.

TITLE: Specific polycondensation of amino acid esters

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1962, 170 - 171

TEXT: Experiments showed that the polycondensation of dl-alanine methyl ester was greatly accelerated by silica gel. Diketo piperazine (of the cyclic alanine dimer) and polypeptide, ratio 96 : 4, are formed. The molecular weight of the polypeptide was higher than in polycondensation by CO_2. The effect of silica gel modified by organic substances was studied. Freshly precipitated silica gel produced according to V. V. Patrikeyev et al. (Dokl. AN SSSR, no. 4, 851 (1960)) was treated (1) with 2% diketo piperazine solution (produced from alanine); (2) with 2% tripeptide-alanyl glycyl glycine solution; (3) an untreated silica gel sample was used for control. The impregnated silica gels were dried, pulverized, treated on the water bath with perhydrol, washed with hot water, and dried on the

Card 1/3

water bath. Then, they were reacted with alanine methyl ester (ratio 1 : 1) at 37°C. The course of reaction was observed by determining, at certain intervals, the content of nonreacted monomer by extracting with ether. About 20% of monomer only was polycondensed after 100 hr without silica gel. With silica gel, monomer consumption was about 90%. The polycondensates were extracted with hot water, and evaporated in vacuo. The linear polymers were adsorbed by an ion exchanger (polystyrene with 4% divinyl benzene, sulfonated under mild conditions), the nonpolar diketo piperazine was eluted with H_2O. The cyclic dimer was identified by Moore and Stein's ninhydrin method (see below). The following was found. The silica gel treated according to (1) yielded a diketo piperazine : polypeptide ratio of 96.5 : 3.5; the silica gel treated according to (2) yielded a ratio of 86 : 14. The control sample (3) had a ratio of 96 : 4. A silica gel pretreated with casein yielded a ratio of 50 : 50. Thus, the specifically modified surface of silica gel acts as a matrix for an oriented specific polycondensation of amino acids. There are 1 figure, 1 table, and 7 references: 6 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Moore, W H Stein J. Biol Chem., [illegible]

Card 2/3

S/062/62/000/001/011/015
B101/B110

Specific polycondensation of ...

907 (1954).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N D Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: July 3, 1961

Card 3/3

PATRIKEYEV, V.V.; AYBULATOV, N.A.

Method of measuring the wearing away of rocks in the coastal zone. Okeanologiia 5 no.5:910-912 '65.
(MIRA 18:11)

1. Institut okeanologii AN SSSR.

PATRIKEYEV, V.V.; SELEVTSOVA, G.A.; ORLOVA, K.I.

Microfertilizers on the basis of molybdene and copper-molybdenum ores. Trudy NIUIF no.208:153-158 '65. (MIRA 18:11)

L 1357-66

ACCESSION NR: AP5024365 UR/0286/65/000/015/0033/0033
534.321.9:543.41

24
B

AUTHOR: Patrikeyev, V. V.; Sholin, A. F.

TITLE: A method for visual observation of ultrasonic fields. Class 22, No. 173239

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 33

TOPIC TAGS: ultrasonic field, ultrasonic radiation

ABSTRACT: This Author's Certificate introduces a method for visual observation of ultrasonic fields with subsequent analysis by the shadow method. To fix and preserve the patterns of complex ultrasonic fields, a quick-setting gel is exposed on which a surface relief is formed which can be observed not only during the ultrasonic exposure, but after its conclusion.

ASSOCIATION: none

SUBMITTED: 16May61 ENCL: 00 SUB CODE: GP

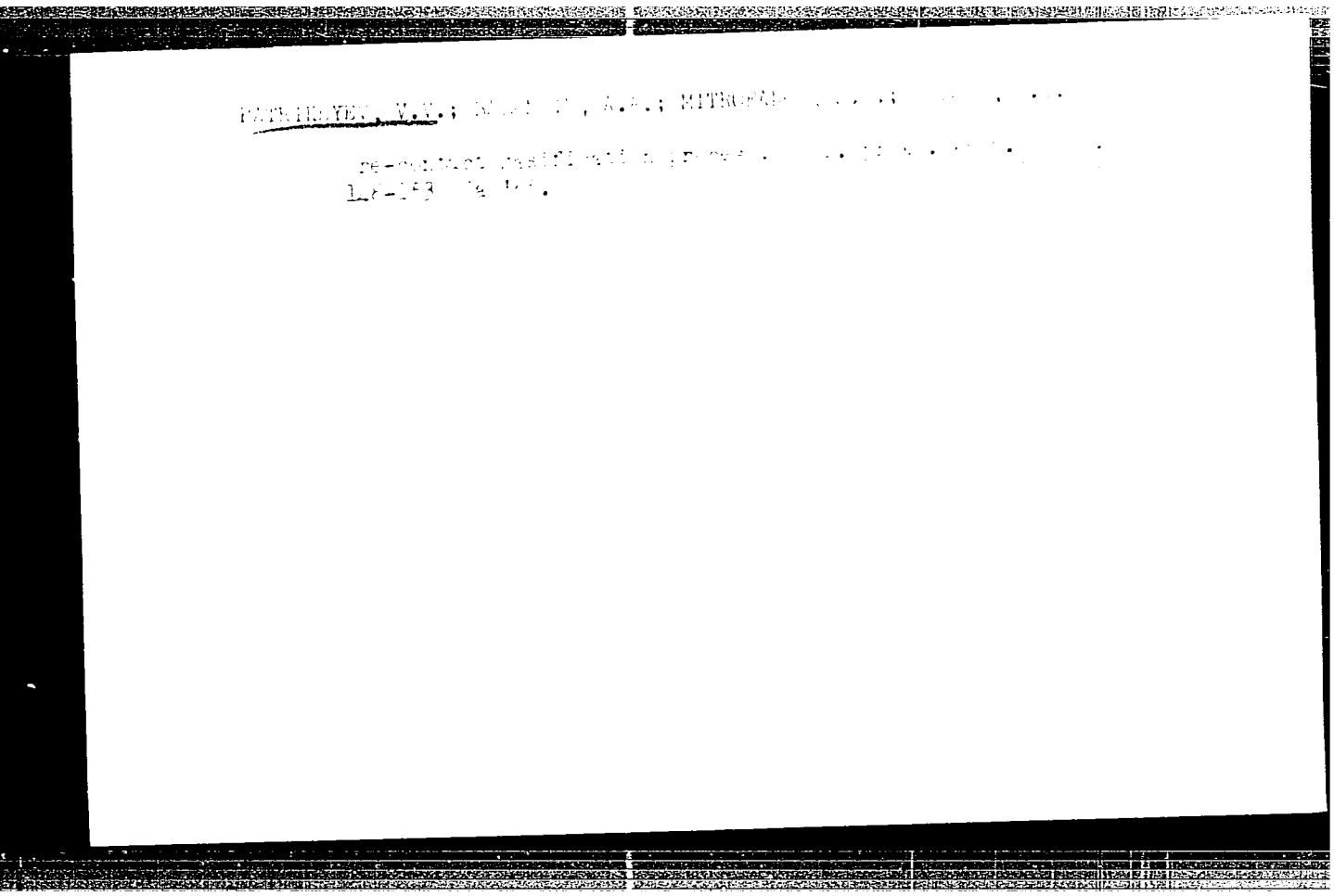
NO REF SOV: 000 OTHER: 000

Card 1/1

BALASHOVA, S.A.; PATRIKEYEV, V.V.; BALANDIN, A.A.

[redacted] to prepare a chemical model of the action of alcohol dehydrogenase. Izv. AN SSSR. Ser. khim. no.7:1273-1274 '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.



BALANDIN, A.A.; PATRIKEYEV, V.V., ZHAKHOVA, Z.K., PITENKO, [illegible]

Determination of chemical equilibrium by the differential thermocouple method. Zhur. fiz. khim. 36 no.9:1954-1957 S '62. (MIRA 17:6)

1. Institut organicheskoy khimii AN SSSR.

PATRIKEYEV, V.V.; SHOLIN, A.F.; NIKIFOROVA, I.A.

Specific silica gels and the method for separating complex mixtures of organic substances. Izv. AN SSSR. Otd.khim.nauk no.6:1031-1035 Je '63. (MIRA 16:7)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Silica) (Adsorbents)

L 12729-63 EWP(q)/EWT(m)/BDS AFFTC/ASD RM/JD
ACCESSION NR: AP3002286 S/0062/63/000/006/1031/1035

58
57

AUTHOR: Patrikeyev, V. V.; Sholin, A. F.; Nikiforova, I. A.

TITLE: Specific formulation of silica gels and the method of separation of complex organic mixtures

27

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1031-1035

TOPIC TAGS: specific silica gel preparation, methylestosteron separation from ehtylestosteron

ABSTRACT: The method of preparation of specific silica gels by means of introducing formulating material into the gel shows possibilities of preparation of such adsorbents, including adsorbents for the substances insoluble in water solutions. The specificity of these gels was proved by the fact that they separate not only the different compounds from each other, but also their isomers. A general method for separating the previously inseparable substances from the complex mixtures by means of preparation of specific silica gels directly from the existing industrial silica gels has been presented. A method is found for the separation of complex alkaloid mixtures from the groups of substituted hormones. Orig. art. has: 1 table.

Association: Inst. of Organic Chemistry, Academy of Sciences SSSR

Card 1/2

PATRIKEYEV, V.V.; SMIRNOVA, Z.S.; MAKSIMOVA, G.I.

Some biological properties of specifically formed silica gel.
Dokl. AN SSSR 146 no.3:707-709 S '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
Predstavleno akademikom A.A.Balandinym.
(Silica)

PATRIKEYEV, V.V.; SHAKHOVA, S.K.

Application of the refractometric method of analysis for the study of catalytic reaction equilibrium. Izv.AN SSSR.Ser.khim. no.8:1365-1367 Ag '63. (MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Catalysis) (Refractometry)

S/887/61/000/000/028/069
E194/E155

AUTHOR: Patrikeyev, V.V.

TITLE: A device for visual observation of ultrasonic fields. (A.c. no.129378, cl. 42k, 46_{06} (no. 642150 of October 24, 1959))

SOURCE: Sbornik izobreteniy; ul'trazvuk i yego primeneniye. Kom. po delam izobr. i otkrytiy. Moscow, Tsents. byuro tekhn. inform., 1961, 41

TEXT: This device, used during irradiation of objects with ultrasonic beams, is notable for the use of a hermetically-sealed vessel with transparent walls filled with a liquid saturated with gas. The instrument is connected to an aneroid bellows which is used to alter the pressure in the vessel (Fig.33). The volume of the bellows is altered by a cam driven by an electric motor. When an object placed in the centre of the vessel is irradiated with ultrasonics, gas bubbles are evolved in the liquid which disappear on raising the pressure in the bellows. A pressure and rate of change of pressure are found with which, with convenient irradiation, sonic reflections can easily be observed by the

Card 1/3

A device for visual observations ... S/887/61/000/000/028/069
E194/E155

scattering of light by gas bubbles which are evolved as the pressure is reduced.
There is 1 figure.

[Abstractor's note: Complete translation.]

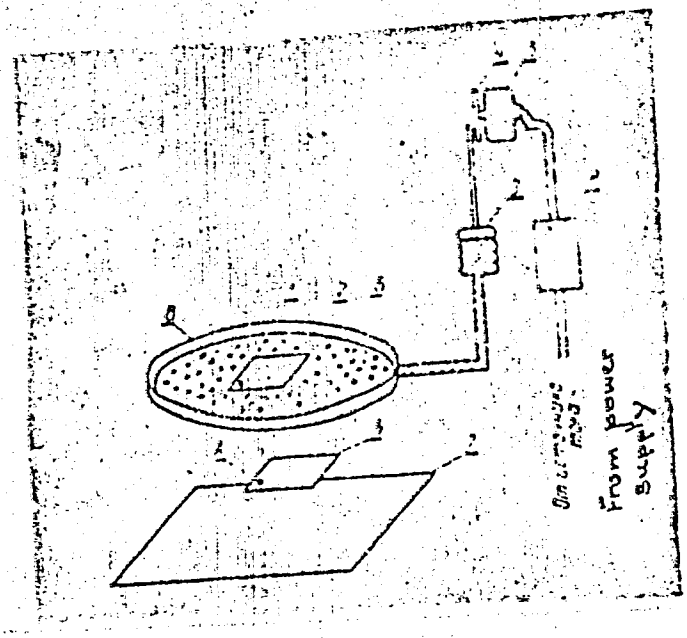
Fig.33. Device for visual observation of ultrasonic fields.
1 - vessel; 2 - transparent wall; 3 - aneroid bellows;
4 - cam; 5 - electric motor; 6 - object;
7 - ultrasonic source; 8 - electric supply switch.
A - flaw in object;
Б and B - sonic shadow of object and flaw.

Card 2/3

S/887/61/000/000/028/069
E194/E155

A device for visual observations ...

Fig.33



Card 3/3

PATRIKEYEV, V.V., BALANDIN, A.A., BUTKOV, M.A.

Investigations carried out at IOKhAN SSSR on gasification of sulfurous petroleum residues.

REPORT presented at the 12th Conference on high molecular weights compounds devoted to monomers, Baku, 3-7 April 62

PATRIKEYEV, V.V.; KOZARENKO, T.D.; BALANDIN, A.A.

Specific polycondensation of amino acid esters. Izv. AN SSSR Otd.khim.nauk no.1:170-171 Ja '62. (MIRA 15:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Amino acids) (Esters) (Polymerization)

ARBUZOVA, K.S.; PATRIKEYEV, V.V.

The attachment apparatus of the rock barnacles Balanus improvisus Darwin and B. eburneus Gould of the Black Sea. Okeanologiia 1 no.4:688-690 '61. (MIRA 14:11)

1. Institut okeanologii AN SSSR.
(Black Sea--Cirripedia)

PATRIKEYEV, V.V.

A possible approach to the calculation of the motion of sand during a storm. Vest.Mosk.un.Ser.biol., pochv., geol., geog. 14 no.1:217-221 '59. (MIRA 12:9)

1. Moskovskiy gosudarstvennyy universitet, Kafedra organicheskogo kataliza.

(Ocean bottom)

S/020/60/132/03/57/066
B011/B005

18.8300

AUTHORS: Arbuzova, K. S., Patrikeyev, V. V.

TITLE: The Role of Balanus in the Corrosion of Stainless Steel in the Black Sea

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 3, pp. 693 - 695

TEXT: In previous papers dealing with the same subject (Refs. 1-8) there was no convincing proof that barnacles influence the corrosion of various steel types. The authors wanted to clarify by experiments the causes of corrosion of stainless steel under the barnacles attached to it: 1) They made experiments with marble plates in which electrochemical corrosion was eliminated. 2) To clarify the formation of interspaces between the barnacle shell and the base, experiments were made with plates of stainless steel of the type 1X18H9T (1Kh18N9T) and of glass. The plates were placed into sea water in the port of Batumi for 6 months. The barnacle species clinging to the plates were Balanus improvisus Darwin and B. eburneus Gould. The authors investigated 10,630 partly living, partly dead barnacles

Card 1/3

The Role of Balanus in the Corrosion of Stainless Steel in the Black Sea

S/020/60/132/03/57/066
B011/B005

corrosion under other organisms clinging to objects in the sea: Bryozoa and Serpulidae. Apparently, no gap is formed between them and their base. There are 10 references, 8 of which are Soviet.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Institute of Oceanology of the Academy of Sciences, USSR). Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

PRESENTED: December 6, 1959, by A. A. Balandin, Academician

SUBMITTED: December 2, 1959

Card 3/3

SMIRNOV, B.I., [illegible] Yu.I.

Relation between dislocation density and stresses in deformed LiF crystals. Fiz. tver. tela 7 no.6:1649-1652 Je '65.
(MIRA 18:6)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

SMIRNOV, B.I.; PATRIKEYEV, Yu.I.

Effect of the conditions of deformation on the yield strength and dislocation structure of LiF crystals. Fiz. tver. tela 6 no.6:1664-1670 Je '64. (MIRA 17:9)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

L 1607-66 EWT(l)/EWT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JW/JG/GG

ACCESSION NR: AP5014558 UR/0181/65/007/006/1649/1652

AUTHORS: Smirnov, B. I.; Patrikeyev, Yu. I.

TITLE: On the connection between the dislocation density and stresses in the deformation of LiF crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1649-1652

TOPIC TAGS: dislocation density, dislocation motion, lithium fluoride, crystal lattice structure, crystal deformation, deformation stress, yield point

ABSTRACT: This is a continuation of earlier work by the authors, (FTT v. 6, 1664, 1964), where it was shown that the density of screw dislocations in the slip bands, near the yield point of LiF crystals, is linear in the ultimate yield, regardless of the hardness of the crystal and of the rate and temperature of the deformation. In the present study the authors investigated the density of screw dislocations in LiF crystals deformed by compression at 377K, and measured its dependence on the deformation stress beyond the yield point. In

Card 1/3

addition, observations were made of the changes in the dislocation structure with variation of the deformation temperature. The LiF crystal was grown by the Kiropoulos method and annealed. The deformation was produced by compression along the 001 axis using equipment described by G. A. Dubov and V. R. Regel' (ZhTF v. 25, 2542, 1955) at a rate of 10^{-4} sec^{-1}. Some samples tested at one temperature were compressed further at another temperature. At the same time, the stresses at which plastic deformation began during the course of the second loading was measured. The tests showed that the screw dislocation density is determined by the yield point and by the finally attained stresses, and varies linearly with these quantities. A decrease in the dislocation density was observed in samples deformed at 300K after first compressing them at 77K. The results are analyzed and compared with those by others, and it is concluded that the stresses at which intense flowing of the sample begins are determined by other factors, besides the dislocation density, and further study in this direction is needed. The authors thank N. I. Bispen, Z. A. Smirnova, S. F. Sal'nikova, and P. A. Tsirul'nik for supplying the LiF crystals with low dislocation density, and are grateful to L. M.

L 1607-66

ACCESSION NR: AP5014558

6

Shestapalov and A. N. Orlov for reading the manuscript and for comments.' Orig. art. has: 1 figure, 9 formulas, and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Physicotechnical Institut, AN SSSR)

SUBMITTED: 13Nov64 ENCL: 00 SUB CODE: SS

NR REF SOV: 003 OTHER: 008

Card 3/3

ACCESSION NR: AP4039651 S/0181/64/006/006/1664/1670

AUTHORS: Smirnov, B. I.; Patrikeyev, Yu. I.

TITLE: Effect of deformation conditions on the limit of fluidity and dislocation structure of LiF crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1664-1670

TOPIC TAGS: deformation mechanism, fluidity, dislocation, lithium floride, shear stress/ MBI 6 microscope

ABSTRACT: Previous experiments with LiF showed that the shear stress τ was linearly dependent on the dislocation density ρ ($\tau = \alpha\rho$ where $\alpha = 3.7$ dynes/dislocation) and that an increase in τ led to a narrowing of the slippage bands and an increase in ρ. The authors studied the effect of changes in the rate and temperature of deformation on the above relationship. Large LiF crystals contaminated with Mg $\sim$ 0.002% and Fe $\sim$ 0.001%) were annealed at 750C for 48 hours, cooled at the rate of $\sim$ 10C/hour, and then segmented. Some segments were reannealed and cooled at $\sim$ 20C/hr. The specimens ($\sim$ 5 x 5 x 15 mm^3) had a $\rho \sim 10^4$cm^{-2} (exposed by etching and examined under the microscope MBI-6). The

Card 1/4

ACCESSION NR: AP4039651

deformation (in the [001] direction) for doubly annealed specimens was tested at 77 and 300K over deformation ratee 10^{-5}-10^{-2}sec^{-1}, and for the singly annealed specimens at the rate 10^{-4}sec^{-1} at 77, 180 and 300K. Three types of deformation curves were observed (see Fig. 1 on the Enclosure) from which the fluidity limit σ and the limit of proportionality σ_ε may be determined. Figure 2 on the Enclosure shows the experimental results which proved $\sigma = B\varepsilon^r$ (for the fluidity limit σ_s; at 300K, $r = 0.1$; at 77K, $r \sim 0$). Slippage occurred on two orthognal planes, either on (101) and ($\bar{1}$01) or (011) and (0$\bar{1}$1). In the initial deformation ρ remains nearly constant as long as the slippage planes do not cover all the surfaces of the sample. Only the ρ's of ordinary bands were included in the deformation study on the fluidity plateau at 77, 180, and 300K. Studies were also made with stress maintained for about 1 second, resulting in nearly complete coverage of the sample by slippage planes. Tests of differently hardened crystals distorted the linearity of $\rho = \beta\tau$ ($\beta = 2.4$-$2.7 \cdot 10^5$ dislocation/kg). The results are discussed in the light of the motion of the dislocations and its relation to the stresses, the number of mobile dislocations (initially constant despite the increase in the total number of dislocations), and the composition of the shear stress τ. This shear is determined by the forces of Peierls-Navarro, by dislocation drag at the steps, by impurities and other defects in the lattice, and by

Card 2/4

ACCESSION NR: AP4039651

interaction with other dislocations which may cause plastic deformation ($\tau = \tau_o + \tau_G + \tau_f + \tau_d$ where τ_o is initial stress, τ_G is the counteraction using Burgers vector, τ_f pertains to the group of dislocations, and τ_d deals with the dipole dislocation). The authors thank E. M. Nadgornyy and A. N. Orlov for their discussion, and V. R. Regel' for the use of the dislocation machine. Orig. art. has: 1 table, 4 figures, and 18 equations.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Physico-technical Institute AN SSSR)

SUBMITTED: 17Dec63 ENCL: 01

SUB CODE: SS NO REF SOV: 002 OTHER: 012

Card 3/4

ACCESSION NR: AP4039651

ENCLOSURE: 01

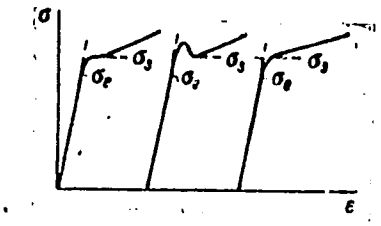


Fig. 1. Form of deformation curves of LiF crystals.

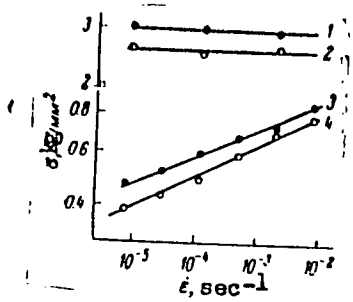


Fig. 2. Dependence of fluidity limits (1 and 3) and proportionality (2 and 4) on the deformation rate at 300K (3,4) and 77K (1,2).

Card 4/4

TENENBAUM, M.M., YANOVSKIY, I.I., ARTSIMOVICH, V.N., PATRIKEYEVA, E.M.

Machine for testing hard-alloy tools for repeated impact. Zav. lab. 26 no.7:883-884 '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnologicheskiy institut ugol'nogo mashinostroyeniya.
(Testing machines)

PATRIKEYEVA, G.I.

Bottom sediments of the Maloye More. Trudy Baik.limnol.sta. (MIRA 12:12)
17:205-254 '59.
(Maloye More--Sedimentation and deposition)

VILENSKIY, Yu.B.; VERETENOVA, T.N.; BUDARINA, N.N.; PATRIKEYEVA, L.F.

Hardening of photographic materials. Zhur.nauch.i prikl.fot. i kin. 5 no.6:401-402 N-D '60. (MIRA 14:1)

1. Filial Nauchno-issledovatel'skogo kinofoto instituta, Shostka.
(Photographic emulsions)

DOBROVOL'SKIY, I.P.; PATRIKEYEVA, L.M.; Prinimali uchastiye: CHERVOV, A.P.; KOSTENKO, A.R.; PARTINA, T.V.

Utilization of pitch distillates for the production of high temperature pitch. Koks i khim. no.4:48-50 '61. (MIRA 14:3)

1. Chelyabinskiy metallurgicheskiy zavod (for Dobrovol'skiy, Patrikeyeva).
(Chelyabinsk—Pitch)

KREPS, Ye.M.; MANUKYAN, K.G.; PATRIKEYEVA, M.V.; SMIRNOV, A.A.; CHENYKAYEVA, Ye.Yu.; CHIRKOVSKAYA, Ye.V.

Phosphoglipids of subcellular brain particles in chick embryogeny. Zhur. evol. biokhim. i fiziol. 1 no.1:16-25 Ja-F '65. (MIRA 18:6)

1. Institut evolyutsionnoy fiziologii i biokhimii im. I.M. Sechenova AN SSSR, Leningrad. 2. Glavnyy redaktor "Zhurnala evolyutsionnoy biokhimii i fiziologii" (for Kreps).

L 62782-65
ACCESSION NR: AP5020628 UR/0218/64/029/006/1111/1118

AUTHOR: Kreps, Ye. M.; Manukyan, K. G.; Patrikeyeva, M. V.; Smirnov, A. A.; Chenykayeva, Ye. Yu.; Chirkovskaya, Ye. V.

TITLE: Phospholipids of the subcellular particles of hen's brain

SOURCE: Biokhimiya, v. 29, no. 6, 1964, 1111-1118

TOPIC TAGS: cell physiology, brain, cytology, experiment animal

Abstract: Investigations were conducted to determine the content of phospholipids in the subcellular particles (mitochondria, microsomes, and nuclei) of a hen's brain. Grown hens of the White Leghorn variety were used in the investigations. A hen's brain separated from the membrane and the blood vessels was reduced to fine particles and homogenized with a solution of saccharose and ethylenediamine tetraacetate for two minutes. The subcellular particles were isolated by differential centrifuging at temperatures of + 2 to four degrees. The phospholipid content in the subcellular particles was determined by paper chromotography. The investigations established that the phospholipid content was largest in the microsomes, and somewhat lower in the mitochondria and nuclei -- by 10-15 percent. Some differences characterized the fractions: lecithin was

Card 1/2

L 62762-65
ACCESSION NR: AP5020628

found to be the largest component in all of the fractions; the fraction content of phosphatidilethanol and phosphatidilserine was somewhat smaller; small concentrations of sphingomyelin, phosphatidilinositol, and phosphatidilglycerol were found. An absence of phosphatidilglycerol is characteristic of the microsomes, although it is always present in the mitochondria and nuclei. It was established also that the microsomes contain larger quantities of shingomyelin and lecithin than the other fractions, while the mitochondria contain larger quantities of ethanoaminophosphatide and serinophosphatide. Orig. art. has 1 figure and 2 tables.

ASSOCIATION: Institut evolyutsionnoy fiziologii i biokhimii im. I. M. Sechenova Akademii nauk SSSR, Leningrad (Institute of Evolutionary Physiology and Biochemistry, Academy of Sciences SSSR)

SUBMITTED: 23Apr64 ENCL: 00 SUB CODE: LS

NO REF SOV: 005 OTHER: 020 JPRS

Card 2/2

PATRIKEYEVA, M.V.

Plasmalogens in the cerebral mitochondria in chickens in ontogeny. Vop. med. khim. 11 no.2:99-101 Mr-Ap '65. (MIRA 18:10)

1. Laboratoriya biokhimii Instituta evolyutsionnoy fiziologii i biokhimii imeni I.M.Sechenova AN SSSR, Leningrad.

PATRIKEYEVA, N.A.

Experiments on self-induction. Fiz.v shkole 16 no.5:76 S-O '56.
(MLRA 9:11)

1. 97-ya srednyaya shkola.
(Induction (Elektricity))

PATRIKEYTSEV, Mikhail Vasil'yevich; TONKOV, A.A., kapitan 2 ranga, redaktor; SOKOLOVA, G.F., tekhnicheskiy redaktor.

[Seamen gunners] Komendory. Moskva, Voen.izd-vo Ministerstva obor. SSSR, 1955. 70 p. (MLRA 9:1)
(Seamen)

PATRIKEYEVA, N.P.

Some data on the petrography of the Izhma-Omra complex in the southern Timan Ridge. Izv.vys.ucheb.zav.; geol.i razv. no.2:97-99 F '62. (MIRA 15:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Timan Ridge--Petrology)

KARGIN, V.A.; PLATE, N.A.; PATRIKEYEVA, T.I.

Copolymerization of potassium acrylate and acrylamide under heterogenous conditions. Vysokom. soed. 6 no.11:2040-2045 N '64 (MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

L 16325-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL/ESD(gs)/
ESD(t)/ASD(m)-3 WW/RM
ACCESSION NR: AP4049155 S/0190/64/006/011/2040/2045

AUTHOR: Kargin, V. A.; Plate, N. A.; Patrikeyeva, T. I.

TITLE: Copolymerization of potassium acrylate and acrylamide under heterogeneous conditions

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 11, 1964, 2040-2045

TOPIC TAGS: potassium acrylate, acrylamide, copolymerization, acrylic copolymer, magnesium peroxide, hydrogen peroxide, lead chromate, hydrogen epoxide, polymerization initiator, heterogeneous polymerization, polymerization catalyst, ultraviolet light

ABSTRACT: The copolymerization of potassium acrylate and acrylamide in aqueous solutions induced by an insoluble radical initiator was investigated. A study of the peculiarities of the polymerization of acrylic monomers under heterogeneous conditions showed that the solid surface of the catalyst adsorbing the monomer molecules and initiating the polymerization has a regulating effect on the elementary reaction of chain growth. Water-insoluble inorganic peroxides and salts capable of redox reactions with the formation of free radicals were used as heterogeneous catalysts and water-soluble acrylamide and acrylates were used as monomers. The experimental procedure is described. The tabulated data

Card 1/3

on copolymerization of potassium acrylate and acrylamide (1:4 by weight) with different initiators, such as magnesium peroxide, hydrogen peroxide in the presence of magnesium oxide, a redox system of lead chromate and sodium thiosulfate hydrogen epoxide, or ultraviolet light show that the copolymer contains a larger amount of acrylate (by 10%) than after homogeneous polymerization, while the results agree well for the three different heterogeneous and homogeneous systems. This shows the independence of the composition of the copolymer of the type of initiator under the conditions of the same reaction mechanism and equilibrium constants of copolymerization. Other experiments with hydrogen peroxide over magnesium oxide also confirmed that the peculiarities of the copolymerization under heterogeneous conditions are correlated with the effect of the solid surface of the catalyst on chain propagation rather than with its initiating effect. The copolymerization of potassium acrylate and acrylamide in the presence of potassium propionate showed that potassium propionate is adsorbed onto the magnesium oxide, removes the acrylate from the surface of the latter and affects the composition of the copolymer. During the copolymerization of potassium acrylate and acrylamide under homogeneous and heterogeneous conditions, the equivalent values of the copolymerization constants r_1 and r_2 vary. They are 1.35 and 0.78 (in the heterogeneous process) or 0.84 and 1.4(in the homogeneous process). This leads to copolymers of different chemical composition from the same

L 16325-65
ACCESSION NR: AP4049155

mixture of monomers. The potentiometric titration curves of saponified copolymers of potassium acrylate and acrylamide of the same composition obtained under homogeneous and heterogeneous conditions show that the dissociation constants (pK) of the acids for the copolymers obtained under different conditions have different values. For heterogeneous copolymerization: pK = 4.4597; for homogeneous copolymerization, pK = 4.2760, i.e. Δ pK is equal to 0.1837. The same conclusions as to the different structure of the chains can be drawn from the specific viscosity of the two types of polymer solutions plotted against the pH of the medium. The regulating effect of the heterogeneous catalyst leads to the formation of copolymers which have a different chain microstructure than the copolymers of the same chemical composition, but obtained under homogeneous conditions. Orig. art. has: 3 tables, 4 figures and 3 formulas.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 24Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 000

Card 3/3

PLATE N.A.; SHIBAYEV, V.P.; PATRIKEYEVA, T.I.; KARGIN, V.A.

Synthesis and properties of graft copolymers of isotactic and atactic polystyrenes. Vysokom. soed, 3 no.2:292-298 F '61. (MIRA 14:5)

1. Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.
(Styrene)

89590

S/190/61/003/002/008/012
B101/B215

15.8600 2209

AUTHORS: Plate, N. A., Shibayev, V. P., Patrikeyeva, T. I., Kargin, V.A.

TITLE: Synthesis and properties of grafted copolymers of isotactic and atactic polystyrene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 2, 1961, 292-298

TEXT: In previous papers, the authors together with other collaborators, (Refs.1-4: Vysokomolek.soyed.1,114,1959; 1, 1101, 1959; 1, 1547, 1959; 2, 166, 1960) studied grafted copolymers of chemically and physically different components. The present paper reports on the examination of grafted copolymers consisting of chemically equal chains which are different in structure: copolymers with crystalline, isotactic polystyrene main chains, and amorphous, atactic polystyrene side chains. They were produced by ozonization of isotactic polystyrene (PS) whose atactic fraction was washed out by boiling methyl-ethyl ketone. The fraction insoluble in this solvent, had a molecular weight of 80,000.

Card 1/7

Synthesis and properties of grafted...

Ozonization was conducted in a glass vessel. The experimental conditions are given in a table. After the reaction, N_2 was blown through the apparatus, and evacuated at room temperature; the content of active O_2 in the sample was determined by elementary analysis. Ozonization of PS films was less effective due to the difficult diffusion of ozone. In agreement with P. Lebel (Ref.10: Thesis, Paris 1957), the infrared spectrum showed no OH bands thus proving the absence of hydrogen peroxide. Peroxide of experiment no. 5 (see table) served as initiator for the polymerization of atactic styrene monomer. The latter was carried out in phials, either in argon atmosphere or in high vacuum. The optimum was found to be: 1 hr of heating up to 60°C, then 2 hr up to 65°C, 3 hr up to 70°C, and finally 2 hr up to 75°C. Faster increase in temperature led to the formation of network. In solutions (benzene, toluene), polymers of lower degrees of grafting were obtained. Atactic homopolystyrene (side product of the reaction) was removed by a 10 - 15 hr treatment with methyl-ethyl ketone. The molecular weight of the product was 200,000. Grafted copolymers with 17, 31, and 35%

contents of atactic components were obtained. Fig. 2 shows a diagram of turbidimetric titration of atactic polystyrene, mechanic mixtures of 35% of atactic plus 65% of isotactic PS, grafted copolymer with 35% of an atactic component, and isotactic PS (solvent: tetralin, precipitant: butanol). The solubility of the grafted copolymer was lower than that of the linear isotactic PS due to larger macromolecules, but higher than that of atactic PS due to the formation of branched chains. The determination of intrinsic viscosity showed the following results: the initial isotactic PS had a Huggin's constant k' = 0.10. k' of the grafted copolymers was 0.40, and k' of copolymers with different contents of atactic components, in agreement with J. A. Manson, L. H. Gragg (Ref.12: Angew. Chem. 67, 32, 1955), showed no remarkable differences. Fig. 4 gives the thermomechanical properties of the copolymers. The grafted copolymers were found to have a distinct vitrification temperature (90°C), and a high melting point (220-230°C) characteristic of isotactic PS. This is explained by the fact that the structural order of the isotactic component is preserved in the copolymer. Within these two temperatures, the copolymers showed the ability of reversible, highly elastic deformation which was not accompanied by recrystallization. A radiographic analysis

showed that grafting of 17% of the atactic component did not change the diffraction of isotactic PS.. 31% of the atactic component showed wider diffraction lines. The examination of copolymers of crystalline and amorphous components is considered to be an important problem. I. Yu. Marchenko (Ref.13: Vysokomolek. soyed., 2, 549, 1960) is mentioned. There are 5 figures, 1 table, and 13 references: 9 Soviet-bloc and 4 non-Soviet-bloc. The reference to English language publication reads as follows: Y. Landler, Materials of the Gordon Scientific Conference, USA, 1958.

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

SUBMITTED: August 1, 1960

Synthesis and properties of grafted...

Legend to the table: Ozonization of isotactic polystyrene. 1) no. of the experiment; 2) state of aggregation of the polymer; 3) time of ozonization, hr; 4) rate of flow of ozone, l/hr; 5) content of O_2, %; 6) powder; 7) ditto; 8) film.

Озонирование изотактического полистирола

Опыты (1)	Агрегатное состояние полимера (2)	Продолжительность озонирования, часы (3)	Скорость пропускания озона, л/час (4)	Содержание O_2, % (5)
1	(6) Порошок	0	0	0,5
2	(7) То же	1	10	1,10
3	" "	2	10	2,33
4	" "	3	10	4,1
5	" "	4	10	5,78
6	(8) Пленка	4	6--7	0,0
7	(7) То же	4	20	0,5
8	" "	8	20	до 1

Card 5/7

89590

Synthesis and properties of grafted...

Legend to Fig.2: Curves of turbidimetric titration. 1) Atactic PS; 2) mechanic mixture of 35% of atactic and 65% of isotactic PS; 3) grafted copolymer (35 : 65); 4) isotactic PS.

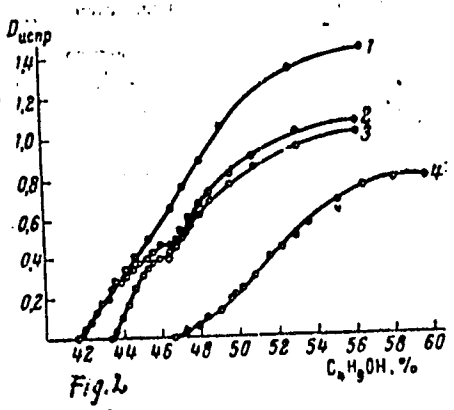


Fig.2

Card 6/7

Synthesis and properties of grafted...

Legend to Fig.4: Dependence of deformation on temperature.
1) Crystalline isotactic PS;
2) graft copolymer (35 : 65);
3) ditto (31 : 69); 4) ditto (17 : 83); 5) atactic PS;
6) amorphous isotactic PS;
a) temperature, °C.

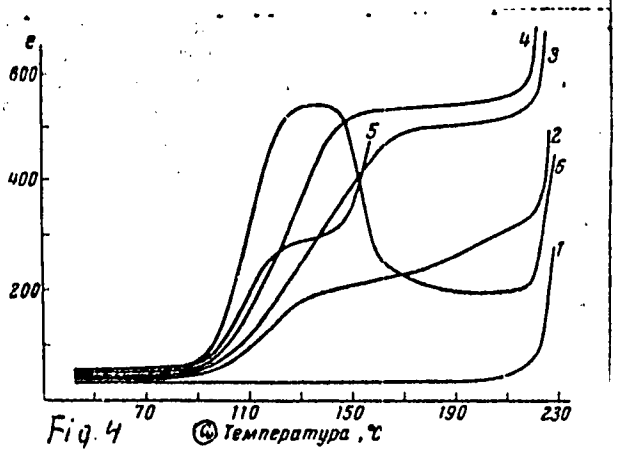


Fig. 4

Card 7/7

PATRIKEYTSEV, M.V.; MOROZOV, K.V., red.; KALACHEV, S.G., tekhn. red.

[Guided rocket launching] Pusk upravliaemykh raket. Moskva, Voenizdat, 1963. 81 p. (MIRA 17:1)

FILIMONOV, A.S., kontr-admiral; PATRIKEYTSEV, M.V., kapitan 1-go ranga zapasa

Antiaircraft defense at sea. Mor. sbor. 48 no.4:95-96 Ap '65.
(MIRA 18:6)

MAKAROVA, Tamara Vil'gel'movna; GOROHSHTEYN, N.A., starshiy geolog. Prinimali uchastiye: LACHINOVA, I.G., starshiy tekhnik-geolog; ARUTYUNOVA, O.I., starshiy laborant; PATRIKI, V.I., starshiy kollektor; NOSAL', V.I., red.

[Permian sediments in the central provinces of the Russian Platform] Permskie otlozheniia tsentral'nykh oblastei Russkoi platformy. Pod red. V.I.Nosal'. Leningrad, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoy lit-ry, Leningr.otd-nie, 1957. 122 p. (MIRA 12:7)

(Russian Platform--Geology, Stratigraphic)

P.

PATRILO, Ya. M., Cand Med Sci--(diss) "Most frequent causes of the wrong diagnosis of cancer of the stomach, and a comparative evaluation of certain laboratory methods for its diagnosis." L'vov, 19[illegible]. 1[illegible] (L'vov State Med Inst), 200 copies (KL, [illegible], 126)

IVANOVA, T.I.; PATRILO, Ya.F.; SENYUTOVICH, V.F.; YURKEVICH, M.A.

Microflora of the gastric contents in stomach cancer. [illegible]
mikrobiol., epid. i immun. 41 no.5 [illegible] 1964.

1. Stanislavskiy meditsinskiy institut.

PATRILO, Ya.P. (Stanislav)

The most frequent causes of erroneous diagnosis of gastric cancer.
Klin.med. 35 no.4:66-71 Ap '57. (MLRA 10:7)

1. Iz Stanislavskogo meditsinskogo instituta (dir. - kandidat meditsinskikh nauk dotsent A.G.Babenko)
(STOMACH NEOPLASMS, differ. diag.
causes for errors)

GUTYRYA, V.S. [Hutyrie, V.S.], doktor khim.nauk; PATRILYUK, K.I. [Patryliak, K.I.], kand.tekhn.nauk; GALICH, P.N. [Halych, P.N.], kand.tekhn.nauk; MASUMYAN, V.Ya., kand.tekhn.nauk; GAPONENKO, O.I. [Haponenko, O.I.]

Separation of aromatic hydrocarbons from kerosene-gas oil fractions. Khim.prom. [Ukr.] no.2:20-22 Ap-Je '65. (MIRA 18:6)

PATRIN, A.A.; YEREMCHENKO, M.I.; RYZHAKOV, P.V.; BAKHIR, Ya.V.; DEKAPOLITOV, I.P.

Concerning the article "Mounting of wire broadcasting networks and electric power transmission lines on common poles." Prom. energ. 17 no.8:32-34 Ag '62. (MIRA 16:4)

1. Belomorskaya elektroset' Karel'skoy ASSR (for Patrin). 2. Gossel'-elektronadzor, g. Groznyy (for Yeremchenko). 3. Glavnoye upravleniye elektrifikatsii sel'skogo khozyaystva, g. Groznyy (for Ryzhakov). 4. Tuymazaneft' (for Bakhir). 5. Darnitskiy setevoy rayon Yugo-Zapadnoy zheleznoy dorogi (for Dekapolitov).
(Electric lines—Overhead) (Electric lines—Poles and towers)

47-6-18/37

AUTHORS: Notov, L.A., Patrin, A.L. (Moscow)

TITLE: Useful Advice (Poleznyye sovety): Coloring of Water (Podkrashivaniye vody)

PERIODICAL: Fizika v Shkole, 1957, # 6, page 63 (USSR)

ABSTRACT: For many experiments it is important to color water. The usual coloring materials leave irremovable sediments on the glass of the vessels, and the useful fluorescein is not always at hand.

Good results are obtained with a filtered pine salt solution. In reflected light the solution is brightly green luminescent (fluorescent), but in a passing light - yellow. The solution retains its properties for a long time and does not stain the vessel's walls. It can also be used to demonstrate the fluorescence of bodies.

ASSOCIATION: 465th Secondary School, Moscow (465-ya srednyaya shkola, Moskva)

AVAILABLE: Library of Congress

Card 1/1

PATRCK, M. YA.

18 18 5 1-4E2C

1947. Analysis of fluxes for magnesium casting by a spectrographic method. M. YA. Patrik and N. I. Kulygina. Zavod. Lab., 1949, 15 (11), 1318-1319.—The flux itself and the portion insoluble in water (CaF_2 and MgO) are analysed separately by a.c. arc excitation of the powders on a carbon electrode. Two relevant sets of standards, each containing $CuCl_2$ to give Cu as an internal standard, are prepared.

G. S. SMITH

PM P.C. MT

PATRIN, P. A.

1329. The firing of wall-tiles in an electric tunnel kiln.—P. A. PATRIN, E. A. MAZO, and S. I. ROZHKOVA (*Glass & Ceramics*, Moscow, 13, No [illegible]) In Russian. A method is suggested for firing wall-tiles biscuit and glost simultaneously in the same [illegible] With a firing temperature of 930° C both tiles [illegible] to each other [illegible] to be of good quality, do not warp [illegible] biscuit) and 16.5 [illegible] glazed). The [illegible] make possible heating from two sides (radiation from elements above and conduction from those below) and to halve the power consumption. (2 figs.)

PATRIN, M. Ye.

4

Spectral analysis of [illegible] magnesium casting. [illegible] 18 [illegible] 21 [illegible] chem. methods: was developed, based on the extn. of the sol. components ($MgCl_2$, $CaCl_2$ + NaCl, KCl, and $BaCl_2$) from the insol. MgO and CaF_2, and testing them separately. The samples were mixed with powd. C in 1:1 proportion.

W. M. Sternberg

PATRIN, M.Ya.; KULYGINA, N.I.

Spectral method for analyzing fluxes for magnesium casting. Zav.lab. 22 no.11:1318-1319 '56. (MLRA 10:2)
(Magnesium founding) (Fluxes--Spectra)

PUTYAKOV, Konstantin Petrovich, kand. tekhn. nauk; POLONSKIY, Lev Davydovich, inzh.; PATRIN, Nikolay Ivanovich, inzh.; VEDENEYEV, Vasiliy Alekseyevich, inzh.; ZHEBROVSKIY, Aleksandr Stepanovich, inzh.; SHIROKOVA, G.M., red.; SIVITSKIY, K.P., nauchn. red.; SHEVCHENKO,T.N., tekhn.red.

[Industrial construction of sugar] Industrial'noe stroitel'stvo sakharnykh zavodov. Moskva, Gosstroiizdat, 1963. 163 p. (MIRA 17:2)

PATRIN, P.A., inzh.; KORCHINSKIY, Ye.K., kand.tekhn.nauk; VOLCHEGURSKIY, L.A., inzh.

Testing double chamber kilns for kilning keramzit. Stroi.mat. 9 no. 12:18-20 D '63. (MIRA 17:3)

PATRIN, P.A.; MAZO, E.E.; ROZHKOVA, N.L.

Wall-tile baking in electric tunnel kilns. Stek.i ker. 13 no.1: 18-20 Ja '56. (MLRA 9:3)

(Tiles) (Kilns)

Physico-chemical properties of carbon black. I. PATRIN and S. PILAT (Kauchuk i Rezina, 1940, No. 10, 14–6; I.R.W., 1940, 218, 210, 284) Determinations were made of the absorption of carbon tetrachloride vapours, the heat of wetting by carbon tetrachloride, the oil number (quantity of linseed oil absorbed), and the temperature of spontaneous combustion of several carbon blacks. The determinations were intended to establish a correlation between their values and the behaviour of carbon black in rubber mixes. No such correlation could be found between the oil number of carbon black and the behaviour of the latter. The values of carbon tetrachloride absorption (ranging from 0.83% by weight for Thermax to 61.5% by weight for Super-Spectra) and those of heat of wetting (0.4 cal./g. for Thermax to 6.5 cal./g. for Super Spectra) run parallel and are indicative of the origin of the carbon black, though ignition temperature is more indicative of origin. 8313

GAYDAROV, Yu.V., kand.tekhn.nauk; PATRIN, V.G., inzh.

Causes of the collapse of steel truss plates. Prom. stroi. 39 no.7:51-53 '61. (MIRA 14:7)
(Trusses)

KESSEL', A., inzh.; UKHAN', Z., inzh.; PATRIN, Yu., inzh.;
DEMSKIY, A., inzh.

New machines for flour and groat mills. Muk.-elev. prom. 28
no.1:10-13 Ja '62. (MIRA 16:7)

1. Gor'kovskiy mashinostroitel'nyy zavod im. Vorob'yeva
(for Kessel', Ukhan', Patrin). 2. Gor'kovskiy mashinostroitel'-
nyy zavod im. Vorob'yeva (for Demskiy).
(Grain-milling machinery)

L 45973-66 EWT(1)/EWT(m)/EWP(k)/T-2/EWP(w)/EWP(f)/EWP(v) IJP(c) WW/EM/GD
ACC NR: AT6026436 (N) SOURCE CODE: UR/0000/66/000/000/0154/0166

AUTHOR: Seleznev, K. P.; Galerkin, Yu. B.; Anisimov, S. A.; Rekstin, F. S.; Patrin, Yu. V.; Simonov, A. M.; Shkarbul', S. N.

65

ORG: None

B+1

TITLE: Results of an investigation of impellers in centrifugal compressors

SOURCE: Leningrad. Nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya. Tsentrobezhnyye kompressornyye mashiny (Centrifugal compressors). Moscow, Izd-vo Mashinostroyeniye, 1966, 154-166

TOPIC TAGS: centrifugal compressor, compressor blade, aerodynamic characteristic

ABSTRACT: The authors review the results of experimental and theoretical studies on improving the aerodynamic characteristics of impellers in centrifugal compressors. It is shown that impellers should be designed with a linear change in the cross sectional area with respect to channel length to improve flow characteristics. The number of blades should be selected on the basis of the optimum apex angle for the channels between blades. Experimental investigation of a large number of single-stage impellers with exit angles of 20, 49 and 90° showed that optimum impellers from the standpoint of maximum efficiency have 8-12, 16-18 and 28 or more blades respectively. However, stability is reduced with an increase in the number of blades so that two-

Card 1/2

L 45973-66

ACC NR: AT6026436

stage cascades are preferable for high-efficiency impellers with a large number of blades. Recommendations are made for optimalizing the operation parameters of various types of centrifugal compressors on the basis of recent experimental research. Orig. art. has: 6 figures.

SUB CODE: 13/ SUBM DATE: 08Jan66/ ORIG REF: 009/ OTH REF: 003

Card 2/2 hs

MATOVSKIY, I. M.; GRIGOR'YEVA, A. T.; YELETSKOVA, A. S.; ODINTSOVA, K.P. PATRINA, G. V. (Chelyabinsk).

Results of the organization of a center for occupational diseases in Chelyabinsk. Zdrav. Ros. Feder. 7 no. 8:26-27 Ag '63. (MIRA 16:10)
(CHELYABINSK--MEDICINE, INDUSTRIAL)

PATRINA, I. B.

81957
S/181/60/002/04/17/034
B002/B063

24,2100

AUTHORS: Ioffe, V. A., Patrina, I. B., Poberovskaya, I. S.

TITLE: Electric Properties of Some Semiconducting Oxide Glasses

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 4, pp. 656-662

TEXT: The authors examined glasses of the systems $V_2O_5 - P_2O_5$, $V_2O_5 - P_2O_5 - BaO$, and $WO_3 - P_2O_5 - K_2O$ (Table). Their electrical conductivity σ was measured by means of a tube voltmeter having a 1 э 1ж(1E1P) tube. A Q-meter of the type Тесла B211 (Tesla V211) and a bridge of the type Тесла М-351 (Tesla M-351) were used to measure the dielectric losses (tan δ) and the dielectric constant ε. σ was determined between 290°K and 500°K. Figs. 1, 2, and 6 show the temperature dependence of σ for the above-mentioned systems. The electrical conductivity of the glasses rises with their content of vanadium and tungsten. This is due to the fact that the conductivity is effected by electron transition between vanadium and tungsten ions of different valences. The conductivity of vanadium glasses mainly depends on the ratio of vanadium oxide to phosphorus oxide, and is

Card 1/2

IOFFE, V.A., PATRINA, I.B.

Electron paramagnetic resonance in vanadium pentoxide single crystals. Fiz. tver. tela 6 no.10:3045-3049 O '64.
(MIRA 17:12)

1. Institut khimii silikatov AN SSSR, Leningrad.

IOFFE, V.A.; PATRINA, I.B; POBEROVSKAYA, I.S.

Electrical properties of some oxide semiconducting glasses. Fiz. tver. tela 2 no.4:656-662 Ap '60. (MIRA 13:10)

1. Institut khimii silikatov AN SSSR, Leningrad.
(Glass—Electric properties) (Semiconductors)

L 12927-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(t)/EWP(b) Pr-4/Ps-4 JD/JG
AFETR/AFWL/AS(mp)-2/ASD(a)-5/ESD/RAEM(i)/RAEM(c)/ESD(gs)/ESD(t)
ACCESSION NR: AP4046617 S/0181/64/006/010/3045/3049

AUTHORS: Ioffe, V. A.; Patrina, I. B.

TITLE: Electron paramagnetic resonance in single crystals of vanadium pentoxide

SOURCE: Fizika tverdogo tela, v. 6, no. 10, 1964, 3045-3049

TOPIC TAGS: vanadium compound, electron paramagnetic resonance, single crystal, hyperfine structure, temperature variation, electric conductivity

ABSTRACT: The purpose of the investigation was to compare information obtained from an investigation of electron paramagnetic resonance (EPR) in V_2O_5 single crystals with the data on electric conductivity of these crystals, which the authors investigated earlier (FTT, v. 6, 2227, 1964). The methods of obtaining the samples and their properties were described in the earlier paper. The spectra

Card 1/3

L 12927-65
ACCESSION NR: AP4046617

5

were investigated with an Re-1301 instrument at a wavelength 3.2 cm, and at 77 and ~300K. The g-factor and the hyperfine structure of the spectrum of V^{4+}(I = 7/2) was determined. The temperature variation of the spectrum was investigated. From the fact that the number of V^{4+} ions remains unchanged as the temperature is varied, and that the electric conductivity is directly proportional to the number of V^{4+} ions in crystals from different sources indicates that the current transfer is effected by electron transitions between the V^{5+} ions. Arguments are presented in favor of the assumption that such migration of the electrons over the lattice sites requires less activation energy than excitation in the d-band. "We thank L. Ya. Shekun, M. M. Zaripov, G. K. Chirkin, and V. G. Stepanov for interest in the work and for useful discussions." Orig. art. has: 3 figures, 2 formulas, and 1 table.

ASSOCIATION: Institut khimii silikatov AN SSSR, Leningrad (Institute of Silicate Chemistry AN SSSR)

Card 2/3

L 12927-65
ACCESSION NR: AP4046617

SUBMITTED: 23Apr64 ENCL: 00

SUB CODE: SS, NP NR REF SOV: 002 OTHER: 003

Card 3/3

L 11429-65 EWA(j)/EWT(l)/EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EWA(d)/EPR/EWP(t)/
EWP(b) Pr-4/Ps-4/Pt-10/Pi-4 ASD(a)-5/AFWL/AFETR/ESD(t) JD/JG

ACCESSION NR: AP4048392 S/0181/64/006/011/3227/3234

AUTHORS: Patrina, I. B.; Ioffe, V. A.

TITLE: Electric properties of vanadium pentoxide

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3227-3234

TOPIC TAGS: vanadium compound, single crystal, polycrystal, electric conductivity, thermal emf, temperature variation, oxidation, reduction

ABSTRACT: The authors investigated the effect of the degree of purification, oxidation, and reduction of V_2O_5 on its electric conductivity and thermal emf. Polycrystalline samples were made of four types of differently treated raw material by pressing at 400 atm/cm^2, in the form of rectangular parallelepipeds. The pressed samples were annealed in air at 600C for several days. Single crystals were ob-

Card 1/3

tained by slow cooling of a melt in a gradient oven in a quartz or platinum crucible. The samples were in the form of plates elongated along the c axis. The electric conductivity and thermal emf were measured by a standard null method. The effect of heating in an oxidizing or reducing atmosphere was also investigated. The results confirm earlier measurements that the electric conductivity of V_2O_5 is affected little by the impurity content and deviation from stoichiometry at room temperatures. The thermal emf, on the other hand, shows greater sensitivity to the amount of impurity and to the effect of the surrounding atmosphere, and is more likely to be sensitive to the surface state of the sample. A future article will be devoted to electron paramagnetic resonance in V_2O_5 and to the mechanism of electron transport in its single crystals. [Abstractor's note: The promised article was actually published in the preceding issue of this journal, no. 10, p. 3045 -- Accession Nr. AP4046617].

L 14429-65
ACCESSION NR: AP4048392

2

"The authors thank Z. N. Zonn for help with the preparation of the samples." Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: Institut khimii silikatov AN SSSR, Leningrad (Institute of Chemistry of Silicates, AN SSSR)

SUBMITTED: 23Apr64 ENCL: 00

SUB CODE: IC, SS NR REF SOV: 003 OTHER: 007

Card 3/3

L 9256-66 EWT(l)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/WW/JG/GG

ACC NR: AP5022718 SOURCE CODE: UR/0181/65/007/009/2754/2758

44,55 44,55 44,55

AUTHOR: Dmitriyeva, L. V.; Ioffe, V. A.; Patrina, I. B.

44,55

ORG: Institute of Silicate Chemistry im. I. V. Grebenshchikov AN SSSR, Leningrad (Institut khimii silikatov AN SSSR)

TITLE: Relationship between electrical conductivity and the state of V^{4+} ions in V_2O_5 crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2754-2758

21,44,55

TOPIC TAGS: vanadium pentoxide, single crystal, EPR spectrum

27 27 21,44,55 18

ABSTRACT: The authors study electrical conductivity and electron paramagnetic resonance spectra in single crystals of V_2O_5 with an admixture of 0.1% MoO_3, and quadrupole splitting in nuclear magnetic resonance spectra of V^{51} in V_2O_5 single crystals. The methods and equipment used for preparation of the specimens and carrying out the experiments are described in detail. Electron paramagnetic resonance spectra are given for the tetravalent vanadium ion in a pure single crystal and in a crystal with an impurity of MoO_3. The experimental data show that V^{4+} ions may be present in single crystals of V_2O_5 in two energy states. Electron paramagnetic resonance data show that both V^{4+} ions as well as the Fe^{3+} ion are in an octahedral field with a strong axial component along axis b. An ion model is proposed for this type of struc-

Card 1/2

DMITRIYEVA, L.V.; IOFFE, V.A.; PATRINA, I.B.

Relation between the electroconductivity and state of V^{4+} ions in V_2O_5 crystals. Fiz. tver. tela 7 no.9:2754-2758 S '65. (MIRA 18:10)

1. Institut khimii silikatov imeni I.V.Grebenshchikova AN SSSR, Leningrad.

PHASE I BOOK EXPLOITATION SOV/5035

Vsesoyuznoye soveshchaniye po steklobraznomu sostoyaniyu. 3d, Leningrad, 1959.

Stekloobraznoye sostoyaniye, trudy Tret'yego vsesoyuznogo soveshchaniya Leningrad, 16-20 noyabrya 1959 (Vitreous State; Transactions of the Third All-Union Conference on the Vitreous State, Held in Leningrad on November 16-20, 1959) Moscow, Izd-vo AN SSSR, 1960. 534 p. Errata slip inserted. 3,200 copies printed. (Series: Its: Trudy)

Sponsoring Agencies: Institut khimii silikatov Akademii nauk SSSR. Vsesoyuznoye khimicheskoye obshchestvo imeni D.I. Mendeleyeva and Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova.

Editorial Board: A.I. Avgustinik, V.P. Barzakovskiy, M.A. Bezborodov, O.K. Botvinkin, V.V.Vargin, A.G. Vlasov, K.S. Yevstrop'yev, A.A. Lebedev, M.A. Matveyev, V.S. Molchanov, R.L. Myuller, Ye.A. Porai-Koshits, Chairman, N.A. Toropov, V.A. Florinskaya, A.K. Yakhkind; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.: V.T. Bochever.

PURPOSE: This book is intended for researchers in the science and technology of glasses.

COVERAGE: The book contains the reports and discussions of the Third All-Union Conference on the Vitreous State, held in Leningrad on November 16-19, 1959. They deal with the methods and results of studying the structure of glasses, the relation between the structure and properties of glasses, the nature of the chemical bond and glass structure, and the crystallochemistry of glass. Fused silica, mechanism of vitrification, optical properties and glass structure, and the electrical properties of glasses are also discussed. A number of the reports deal with the dependence of glass properties on composition, the tinting of glasses and radiation effects, and mechanical, technical, and chemical properties of glasses. Other papers treat glass semiconductors and soda borosilicate glasses. The Conference was attended by more than 300 delegates from Soviet and East German scientific organizations. Among the participants in the discussions were N.V. Solomin, Ye. V. Kuvshinskiy, Yu.A. Gastev, V.P. Pryanishnikov, Yu. Ya. Gotlib, O.P. Mchedlov-Petrosyan, G.P. Mikhaylov, S.M. Petrov, A.N. Lazarev, D.I. Levin, A.V. Shatilov, N.T. Ploshchinskiy, A.Ya. Kuznetsov, E.V. Degtyareva, G.V. Byurganovskaya, A.A. Kalenov, M.M. Skornyakov, P.Ya. Bokin, E.K. Keller, Ye.A. Kuznetsov, V.P. Pozdnev, R.S. Shevelevich, Z.G. Pinsker, and O.S. Molchanova. The final session of the Conference was addressed by Professor I.I. Kitaygorodskiy, Honored Scientist and Engineer, Doctor of Technical Sciences. The following institutes were cited for their contribution to the development of glass science and technology: Gosudarstvennyy opticheskiy institut (State Optical Institute), Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR), Fizicheskiy institut AN SSSR (Physics Institute AS USSR), Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical Institute AS USSR), Institut fiziki AN BSSR, Minsk (Institute of Physics, Academy of Sciences, Belorusskaya SSR, Minsk), Laboratory of Physical Chemistry of Silicates of the Institut obshchey i neorganicheskoy khimii AN BSSR, Minsk (Institute of General and Inorganic Chemistry, Academy of Sciences, Belorusskaya SSR, Minsk), Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High Molecular Compounds, AS USSR), Gosudarstvennyy institut stekla (State Institute for Glass), Gosudarstvennyy institut steklovolokna (State Institute for Glass Fibers), Gosudarstvennyy institut elektrotekhnicheskogo stekla (State Institute for Electrical Glass), Sibirskiy fiziko-tekhnicheskiy institut, Tomsk (Siberian Physicotechnical Institute, Tomsk), Leningradskiy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimiko-tekhnologicheskiy institut (Moscow Institute of Chemical Technology), Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institut imeni Lensovet), Belorusskiy politekhnicheskiy institut Minsk (Belorussian Polytechnic Institute, Minsk), Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnic Institute), and Sverdlovskiy politekhnicheskiy institut (Sverdlovsk Polytechnic Institute). The Conference was sponsored by the Institute of Silicate Chemistry AS USSR (Acting Director - A.S. Gotlib), the Vsesoyuznoye khimicheskoye obshchestvo im. D.I. Mendeleyeva (All-Union Chemical Society imeni D.I. Mendeleyev), and the Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova (State "Order of Lenin" Optical Institute imeni S.I. Vavilov). The 15 resolutions of the Conference include recommendations to organize a Center for the purpose of coordinating the research on glass, to publish a new periodical under the title "Fizika i khimiya stekla" (Physics and Chemistry of Glass), and to join the International Committee on Glass. The Conference thanks A.A. Lebedev, Academician, Professor, and Chairman of the Organization Committee, Ye.A. Porai-Koshits, Doctor of Physics and Mathematics, Member of the Organizational Committee, and R.L. Myuller, Doctor of Chemical Sciences, Member of the Organizational Committee. The editorial board thanks G.M. Bartenev, M.V. Vol'kenshteyn, I.I. [illegible], D.P. Dobychin, S.K. Dubrovo, V.A. Ioffe, and N.T. Kolomiyets. References accompany individual reports.

Chemical Properties of Glasses

Dubrovo, S.K. Chemical Properties of Glasses 413

Nikol'skiy, B.P., Ye.A. Materova, and V.V. Moiseyev. Study of the Interaction of Electrode Glasses With Solutions by Means of the [illegible] Indicator Method 423

Dubrovskiy, V.A., and T.S. Dubrovskaya. On the Composition of the Surface Film of Soda-Lime Silicate Glasses 429

Kukorina, V.F. Effect of Alkali Earth Metal Oxides on the Chemical Stability of Glasses 432

Abramyan, A.V. Leaching of Fused Vitreous Basalts With Aqueous Acid Solutions and the State of the Oxides in the Structure of Basalt Glass 435

Maslov, L.Ya. Vitrification and Properties of Borate Glasses 437

Bezborodov, M.A., E.F. Mazov, and V.S. Kaminskiy. On the Role of Aluminum in Aluminophosphate Glasses 441

Brekhovskikh, S.M., and V.N. Sedorova. Synthesis and Study of the Properties of Barium Silicate Glasses 444

Discussion 446

SOME VITREOUS SYSTEMS OF A SPECIAL NATURE

Semiconductor Glasses

Kolomiyets, B.T. Semiconductor Glasses 449

Ioffe, V.A., I.V. Patrina, and S.V. Poberovskaya. Electrical Properties of Some Semiconductor Oxide Glasses 454

Kolomiyets, B.T., N.A. Goryunova, and V.P. Shilo. Vitreous State in Chalcogenides 456

Kolomiyets, B.T. and B.V. Pavlov. Optical Properties of Chalcogenide Glasses 460

Kolomiyets, B.T., T.F. Mazetova, and T.F. Nazarova. Electrical Properties of Chalcogenide Glasses 465

Vaypolin, A.A., and Ye.A. Poray-Koshits [Doctor of Physics and [illegible]]. X-Ray Diffraction Study of Vitreous Chalcogenides of Arsenic 470

[illegible], V.A., and V.V. [illegible]. Structure and Tendency to Vitrification of Sulfides of Group V Elements in the Periodic System of D.I. Mendeleyev 474

Discussion 478

Soda Borosilicate Glasses

Dobychin, D.P. Control of [illegible] Glass Structure and Problems of the Soda Borosilicate Glass Structure [illegible] 480

Anikov, V.V. Optical Constants and Density of Soda Borosilicate Glasses [illegible]

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MATYUKHINA, M.V. (Volgograd); PATRINA, K.T. (Volgograd); SHNEYDER, D.M. (Volgograd)

Some ways of training students in the senior classes in technical thinking. Vop. psikhol. 8 no.1:11-18 Ja-F '62. (MIRA 15:4)
(TECHNICAL EDUCATION)

S/113/60/000/002/007/009
D207/D306

AUTHORS: Zorina, N. S. and Patrina, N. A. Candidate of Technical Sciences

TITLE: Sintered metal soft magnetic material for automobile electrical equipment parts

PERIODICAL: Avtomobil'naya promyshlennost', no. 2, 1960, 38

TEXT: The NIITAvtoprom (Technological Scientific Research Institute of the Automobile Industry) and the NIIAvtopribor (Scientific Research Experimental Institute of Automobile Electrical Equipment and Instruments) have studied the possibility of manufacturing magnetic conducting parts in automobile electrical equipment from cheap iron powder derived from the reduction of rolling-mill scale. Their research has shown that electric motor stators can be manufactured from AM reduced iron powder by a technological process which includes: roasting the powder in a hydrogen atmosphere at 700°C for 2 hours; screening; pressing at 8 ton/cm^2; sintering in a hydrogen atmosphere at 1,150-1,170°C for 1.5 hours; calibration

Card 1/2

PATRINA, N.A., kand. tekhn. nauk; MESHCHERINOVA, O.N., kand. tekhn. nauk

Using boron steels in manufacturing automobile starters.
Avt. prom. 29 no.8:27-29 Ag '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy i eksperimental'nyy institut avtomobil'nogo elektrooborudovaniya i priborov (for Patrina).

ZORINA, N.S.; PATRINA, N.A., kand.tekhn.nauk

Metal-powder soft-magnetic materials for parts of electric equipment of automobiles. Avt.prom. no.2:38 F 60. (MIRA 13:5)

1. NIITAvtoprom i Nauchno-issledovatel'skiy eksperimental'nyy institut avtotraktornogo elektrooborudovaniya i priborov.
(Automobiles--Electric equipment)

LIN'KOVA, M.G.; PATRINA, N.D.; KNUNYANTS, I.L.

Properties of α,α-diphenyl-β-propiothiolactone. Izv. AN SSSR Otd. khim. nauk no.10:1825-1827 O '60. (MIRA 13:10)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Lactones)

PATRNA, H.

Pathogenesis of malignant growth. Cas. lek. cesk. 103 no.39: 1091-1094 25 S '64.

1. Obvodniho ustavu narodniho zdravi Liberec.

PATROESCU, Maria (Bucuresti)

"Tara Birsei." Reviewed by Maria Patroescu. Natura Geografie 15 no.1:85-87 Ja-F '63.

DUBOVSKIY, I.Ye., kand.tekhn.nauk; PATRONOVA, M.V., inzh.

Study of the shale grinding operation of hammer mills.
Teploenergetika 11 no.2:50-55 F '64. (MIRA 17:4)

1. TSentral'nyy kotloturbinnyy institut.

DUBOVSKIY, I. Ye., kand. tekhn. nauk; PATRONOVA, M. V., inzh.

Wear of pipes of a feed-water economizer caused by the cinders of Estonian shale. Energomashinostroenie 8 no.12:13-17 D '62. (MIRA 16:1)

(Boilers) (Steampipes)