"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

KHARLAMPOVICH, G.D.; IZVEKOV, V.N., insh., retsenzent; MIKHAILOVA, M.A., inzh., nauchnyy red.; KUTEBKOVA, G.M., tekhn.red.

[Coal chemicals as raw materials for the production of polymers] Khimicheskie produkty koksovaniia - syr'e dlia proizvodstva polimerov. Sverdlovsk, TSentral'noe biuro tekhn.informatsii, 1959. 24 p. (MIRA 14:4)

1. Russia (1917- R.S.F.S.R.) Sverdlovskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva.
(Coke industry--By-products) (Polymers)

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L 11679-65 EWT(1)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/GS/AT

ACC NR: AT6002242 SOURCE CODE: UR/2564/65/006/000/0110/0121

AUTHOR: Izvekov, V. N.; Sysoyev, L. A.; Olnikovskiy, Ya. A.; Ilinman, B. I.

ORG: none

TITLE: Preparation of single crystals of refractory compounds from binary or multicomponent systems and effect of temperature conditions of growth on their form and faceting

SOURCE: AN SSSR, Institut kristallografii. Rost kristallov, v. 6, 1965, 110-121

TOPIC TAGS: single crystal growing, cadmium sulfide, aluminum oxide, tungstate, titanate, calcium compound, strontium compound, ruby, corundum

ABSTRACT: The authors studied the growth of cadmium sulfide single crystals from melts of cadmium chloride and iodide and their mixtures, and the growth of single crystals of α-corundum (ruby), rutile, strontium titanate and calcium tungstate from fluorides. CdS single crystals with a wurtzite lattice were obtained in the 600 — 380C range from the $CdS-CdCl_2-CdI_2$ system. The other (oxide) crystals were grown in platinum crucibles in the 1200 -- 700C range with slow cooling. An important feature revealed by these experiments is the dependence of the crystal habit of the crystals obtained on the temperature range of the crystallization. This phenomenon is explained by differences in the growth rates of faces having different crystallographical indices, particularly surface roughness. The concept of the influence of

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L 11079-66

ACC NR: AT6002242

surface roughness on the growth forms of crystals is extended to binary and multicomponent systems. Orig. art. has: 6 figures and 1 table.

SUB CODE: 20, 11 / SUBM DATE: none/ ORIG REF: 004/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ACC NR: AP6023581 SOURCE CODE: UR/0409/66/000/003/0387/0389

AUTHOR: Tsukerman, S. V.; Izvekov, V. P.; Lavrushin, V. F.

ORG: Kharkov State University (Khar'kovskiy gosudarstvennyy universitet)

TITLE: Synthesis of the 4- and 5-nitropyrrole derivatives, analogs of chalcones

SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 3, 1966, 387-389

TOPIC TAGS: nitropyrrole derivative, chalcone analog, physiologically active compound, CHEMICAL SYNTHESIS, PHENYL COMPOUND

ABSTRACT: In a search for new physiologically active compounds, 10 chalcone analogs, with general formulas:
where R is phenyl (I—III), 4-methoxyphenyl (IV-VI), 4-nitrophenyl (VII—IX), and 2-pyrryl (X), were prepared by the Claisen-Schmidt condensation of 4- and 5-nitropyrrole-2-aldehyde with 2-acetylpyrrole, 2-acetylthiophene, or 2-acetylphenone. Equimolar amounts of the reagents in ethanol are treated dropwise with 3—4 mls. 15% NaOH and the mixture is heated under reflux on a water bath for 2—10 hr. Yields, composition, and mp of the nitropyrrole analogs of chalcone and their 2,4-dinitrophenylhydrazones are given in the table. [WA-50; CBR No. 11]

SUB CODE: 07/ SUBM DATE: 21Oct64/ ORIG REF: 003/ OTH REF: 006/

Card 1/1 UDC: 547.741+542.953

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

[illegible], [illegible].

Improve the quality of [illegible]. [illegible] '65. (MIRA [illegible])

1. [illegible]

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

EXCERPTA MEDICA Sec.14 Vol.11/8 Radiology Aug57.

1355. TUMANYAN M. A. and IZVEKOVA A. V. N. F. Gamaleya Inst. of Epidemiol. and Microbiol., USSR Acad. of Med. Sci., Moscow. *The effect of ionising radiation on immunity to intestinal infections (Russian text) MED. RADIOL. 1956, No. 1 (59-65) Tables 5

White mice were exposed to a single total dose (400 r. LD 20/30) of X-rays. In the first series of experiments exposure preceded immunization. Vaccination was carried out by means of typhoid vaccine. In all the experiments verification of the degree of non-susceptibility was performed 7 to 10 days after completion of vaccination by means of intraperitoneal infection by the corresponding culture. Injection of the vaccine in the two days after exposure did not cause an increased resistance to infection. When inoculation was carried out three days after exposure resistance increased only to the level of the natural resistance of non-radiated animals. The introduction of the vaccine on the 7th day already caused an immunity formation inferior to that in immunized but non-exposed animals. Three-dose immunization commencing one day after radiation produced no effect. When two- or three-fold immunization was commenced 7 days after radiation immunity was formed equal in its intensity to the natural resistance of normal mice, or considerably exceeding it. In the second series of experiments the animals were exposed three hours to ten days after single immunization. In mice exposed during the first three days no immunity was found; with radiation at 9 to 10 days it was slightly reduced in the first few days after radiation, however, it completely disappeared 7 to 14 days after radiation. Bibliography.

Chakhova - Moscow

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

TUMANYAN, M.A.; IZVEKOVA, A.V.

Effectiveness of revaccination against typhoid infection in irradiated animals [with summary in English]. Med.rad. 3 no.1:26-29 Ja-F '58. (MIRA 11:4)

1. Iz otdela meditsinskoy mikrobiologii (zav.-chlen-korrespondent AMN SSSR V.L.Troitskiy) Instituta epidemiologii i mikrobiologii imeni N.F.Gamaleya AMN SSSR.

(TYPHOID FEVER, immunology,
revacc. in irradiated animals (Rus)
(ROENTGEN RAYS, effects,
on exper. typhoid fever, eff. of revacc. (Rus)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

TUMANYAN, M.A.; IZVEKOVA, A.V.

Effect of the administration of a bone marrow suspension on the immunity of irradiated animals. Med.rad. 4 no.7:52-59 Jl '59. (MIRA 12:9)

1. Iz otdela radiatsionnoy mikrobiologii i immunologii (zav. - prof.V.L.Troitskiy) Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR.
(RADIATION PROTECTION)
(BONE MARROW extracts)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

TUMANYAN, M.A.; IZVEKOVA, A.V.

Influence of the bone marrow on artificial immunity in irradiated animals. Zhur. mikrobiol., epid. i immun. 32 no.9:58-64 S '61. (MIRA 15:2)

1. Iz Otdela radiatsionnoy mikrobiologii i immunologii Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(MARROW--TRANSPLANTATION) (RADIATION--PHYSIOLOGICAL EFFECT)
(IMMUNITY)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

S/016/65/000/005/001/001
A066/A126

AUTHORS: Troitskiy, V. L. (Deceased), Tumanyan, M. A., Zavekova, A. V.

TITLE: Experiments on the transplantation of lymphoid cells from immunized donors to irradiated animals

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 5, 1965, 5 - 9

TEXT: With a view to ascertaining the most favorable moment of transplantation and its effect on natural immunity, albino rats irradiated with Co^{60} in doses of 600 - 700 r were intravenously injected with suspensions of destroyed lymphoid cells taken from immunized rats. Cervical lymphatic glands were extirpated during the productive phase of antibody formation after a three-stage immunization against typhoid bacilli with 500, 500 and 750 million microbes at intervals of 7 days, or in one dose of 750 million microbes during the inductive phase. The suspensions were administered 24 hours after irradiation, and the antibody titers were

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ACCESSION NR: AP4043062 S/0297/64/009/008/0719/0722

AUTHOR: Tumanyan, M. A.; Izvekova, A. V.

TITLE: Further experimental investigations on the chemotherapy of radiation sickness

SOURCE: Antibiotiki, v. 9, no. 8, 719-722

TOPIC TAGS: radiation sickness, chemotherapy, phenoxypenicillin, mycerin, monomycin, phthalazol, antibiotic, streptomycin

ABSTRACT: The purpose of the investigation was to investigate new chemotherapeutical methods of orally treating complications of radiation sickness. Rats and rabbits were lethally and sub-lethally irradiated with Gamma rays from a cobalt 60 source. Three therapeutical approaches were employed which involved the administration of phenoxy penicillin in combination with other antibiotics. These included: 1) phenoxypenicillin, mycerin, and levomycetin; 2) phenoxypenicillin, monomycin and levomycin; 3) phenoxypenicillin, phthalazole, and levomycetin. Treatment commenced one day following irradiation and was repeated twice a day for 20 days. The results of

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

TUMANY[illegible], [illegible]A., [illegible]

Further studies on [illegible] sickness. Antibiotiki [illegible]

([illegible] 18:3)

1. Otdel [illegible] Immunologii Instituta epidemiologii [illegible], Moskva.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

TUMANYAN, M.A.; [illegible]EVA, A.V.

Recurrence of the disease in irradiated animals treated with bone marrow. Zhur.mikrobiol., epid. i immun. 42 no.10:76-80 O '65. (MIRA 18:11)

1. Institut epidemiologii i mikrobiologii imeni Gamaleii AMN SSSR. Submitted January 7, 1964.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ACC NR: AP6014449 SOURCE CODE: UR/0016/65/000/010/0076/0080

AUTHOR: Tumanyan, M. A.; Izvekova, A. V.

ORG: Institute of Epidemiology and Microbiology im. Gamaleya, AMN SSSR (Institut epidemiologii i mikrobiologii AMN SSSR)

TITLE: Secondary disease in irradiated animals treated with bone marrow

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 10, 1965, 76-80

TOPIC TAGS: bone marrow, mouse, gamma ray, liver

ABSTRACT: Mice irradiated with lethal doses of gamma rays and treated with homologous bone marrow developed a secondary disease. Use of the method of passive anaphylaxis revealed that the disease arose from an unusual immunological situation - the simultaneous occurrence of two conflicting reactions - "host against transplant" and "transplant against host." The symptoms of the secondary disease, especially the morphological changes in the liver and other organs, are similar to the changes characteristic of anaphylactic shock. These changes plus the increased sensitivity to infection suggest that the secondary disease and anaphylactic reaction have a common mechanism of action. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 07Jan64 / ORIG REF: 001 / OTH REF: 013

Card 1/1 UDC: 616-001.28-092.9-085.361.038.46-036.691.097.3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVEKOVA, N. F.

Izvekova, N. F.

"Working with Books in the Hospitals during the Great Patriotic War of the Soviet Nation (1941-1945)." Moscow State Library Inst imeni V. M. Molotov. Moscow, 1955. (Dissertation for the Degree of Candidate in Pedagogical Science)

So: Knizhnaya letopis', No. 27, 2 July 1955

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

SUKHOV, K.S.; IZVEKOVA, L.I.; KAPITSA, O.S.

Spread of potato virus X. Trudy Inst. gen. no.31:335-344 '64.
(MIRA 17:9)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVEKOVA, L.I.

Respiration of plant tissues infected with viruses. Trudy Inst. Gen. no.31:379-387 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVEKOVA, L.I.

Physiological processes as the basis of plant immunity. Trudy Inst.gen. no.35:36-46 '65.

Effect of sodium fluoride on the intensity of respiration in healthy and virus infected tobacco leaves. Ibid.:120-130 (MIRA 18:12)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IL'ICHEV, V.D.; IZVEKOVA, L.M.

Some functional characteristics of the external part of the auditory analysor in birds. Zool. zhur. 40 no.11:1704-1714 N '61. (MIRA 14:11)

1. Laboratory of Ornitology and Department of Fundamental Physics, State University of Moscow.
(Sense organs--Birds) (Ear)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ACCESSION NR: AP4016506 S/0020/64/154/005/1082/1083

AUTHORS: Guberman, Sh. A.; Izvekova, M.L.; Kholin, A.I.; Khurgin, Ya. I.

TITLE: The use of an algorithmic method of discerning shapes in the solution of problems in production-connected geophysics

SOURCE: AN SSSR. Doklady*, v. 154, no. 5, 1964, 1082-1083

TOPIC TAGS: exploratory well, mineral, geophysical method, rock strata, electric resistance, cybernetics, petroleum, gas, algorithm, porosity, porosity classification, physical property, oil saturation, sandstone, limestone

ABSTRACT: The investigation of exploratory wells by geophysical methods includes such operations as rock crushing on the basic of lithological differences, the classification of mineral-bearing rock strata and the correlation of such strata on the basic of geophysical data for the purpose of solving geological and production programs. It is very useful, in this connection, to make use

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

Intra-Osseous Infusions of Isotonic Solutions of Blood, Plasma, and Medical Substances in Children, extract from the author's dissertation, The Medical Institute in Dnepropetrovsk, 1950;

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVERCEANU, N., profesor (Fagat)

The triode functi ning as amp'ifier of electric oscillations.
Gaz mat B 13 no.2:81-83 F '62.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

DAVID, St., ing [deceased]; IZVERNARIU, Ilinca, ing.; CIUL, Ghizela, chim.

Identification of sugar substances by paper chromatography.
Ind alim veget 13 no.3:71-73 Mr '62.

1. Fabrica de zahar, Arad.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

S/081/62/000/009/071/075
B160/B101

Action of petroleum products ...

ing increases when the amount of accelerator is increased. At 100°C no correspondence is observed between the amount of accelerator and the swelling. A change in the amount of accelerator does not change the physico-mechanical properties upon aging. The polar media and mineral oil extract the components from the mixtures. In milk the weight of the specimens increases during the first 24 hrs, after which extraction takes place. Group B. Changing the amount and nature of the accelerator has no effect on aging in the different media but has some effect on swelling. The polar media and mineral oil act in the same way as on Group A. An increase in weight in milk occurs in the first 52 hours at 100°C or 72 hours at 25°C. Group C The effect of the accelerator, mineral oils and polar liquids is the same as in Group B. In milk no extraction takes place in 3 days at 100°C. When the fillers in Groups A, B and C are combined there is a slight reduction in the swelling in the gasoline and benzene mixture. Group D. The mixtures swell more than the mixtures in Groups A, B and C. Milk has a stronger effect on the swelling and the mixture's components are not extracted. The behaviour of the mixtures in the polar media depends on the amount and nature of the accelerators. In non-polar media a change in the amount of accelerator has the same effect as in mixtures A, B and C. [Abstracter's note: Complete translation.]

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOLENSKIY, Vladimir Nikolayevich; VASIL'YEV, V.F., redaktor; YUDZON, D.M., tekhnicheskiy redaktor

[Legal problems of railroad transportation] Pravovye voprosy zheleznodorozhnykh perevozok. 2-e perer. izd. Moskva, Gos.transp. zhel-dor. izd-vo, 1955. 187 p. (MIRA 9:3)
(Railroads--Freight)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

LARIONOV, L.F., BOGOMAZ, L.A., DMITRIYEVA, Ye.V. IZVOLINIMA, Ye.I.
RAKHAYEVA, O.I., TROYANOVSKIY, D.L. (Leningrad)

Sarcolysin therapy in multiple myeloma. Vrach.delo no.8:857-858
Ag '58 (MIRA 11:8)

1. Bol'nitsa imeni Sverdlova.
(MARROW--TUMORS)
(CYTOTOXIC DRUGS)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOL'SKAYA, N.

Latent sources of greater labor productivity in the machinery industry at the time of changing to the seven-hour working day. Sots. trud. 4 no.4:43-47 Ap '59. (MIRA 12:6)
(Machinery industry) (Labor productivity)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOL'SKAYA, N.; TRUSIKHIN, N.

Well organized production is the most important element of work organization. Sots.trud 8 no.4:48-55 Ap '63. (MIRA 16:4)

(Industrial plants—Design and construction)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOL'SKAYA, N.; SLEZINGER, G.

Mechanize administrative work. Sots. trud 6 no.6:43-49 Je '61. (MIRA 16:8)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOL'SKAYA, N.

For a better organization of production administration. Sots. trud 8 no.10:40-46 O '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

S/535/61/000/139/001/009
E140/E435

AUTHOR: Izvol'skiy, Ye.G., Candidate of Technical Sciences

TITLE: The differential equations of longitudinal motion of a vessel with underwater wings considered as an object of automatic control

SOURCE: Moscow, Aviatsionnyy institut. Trudy, no.139, 1961, Voprosy avtomaticheskogo regulirovaniya dvizhushchikhsya ob"yektov, 5-38

TEXT: The article considers the motion of vessels with underwater wings as physical systems consisting of the body of the vessel, the underwater wings, rigidly fixed to the body, propellers and rudders. Various forms of underwater wings are shown in Fig.1. The article deals particularly with the case of two wings intersecting the surface of the water at the bow and the stern. The wings are assumed trapezoidal, intersecting the surface of the water in the angle φ (Fig.2). Considering various limiting cases, the author concludes that the trapezoidal wing is in design and hydrodynamic properties the most general type. In the derivations it is assumed that the flow from the bow wing does not

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the kinematic equation. The transfer and frequency functions of the vessel are then derived, to permit investigation of its behaviour at constant forward velocity with respect to perturbations, e.g. waves on the surface of the water. A block diagram representing the structure of the vessel as a control object is then obtained and indications given on the method for investigating the behaviour of the system under statistical perturbations, such as the wind and waves. A study of the vessel in a closed-loop automatic control system will be the subject of a further article. Engineer Alekseyev is mentioned in the paper with the "Raketa" vessel designed by him. There are 19 figures.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

[illegible] G. [illegible]anov, and K. A. [illegible] [illegible]

8. Variational methods and the theory of accumulative errors -- 344-361

[illegible]

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 30207-66 EWT(m)

ACC NR: AP6020319 SOURCE CODE: BU/0011/65/018/007/0683/0686

AUTHOR: Vassileva-Dryanovska, O.; Izvorska, N.

ORG: Institute of Plant Physiology, BAN, Sofia

4.6
B

TITLE: Cytological changes following ionizing irradiation of root tips of peas

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 7, 1965, 683-686

TOPIC TAGS: radiation plant effect, plant morphology, nuclear reactor, gamma ray, fast neutron, plant metabolism, ionizing irradiation, plant development/IRT-1000 nuclear reactor

ABSTRACT: There have been in the past an increasing number of studies on the radio-stimulating and inhibiting effect of ionizing irradiations on plants and on the changes caused in their cytological picture. The present investigation examines mainly the morphological changes of the nucleoli in dry and germinated seeds. Tests were carried out with the Earliest-of-All and Moskovsky varieties of garden peas and with the fodder variety of field-grown peas which involved gamma rays and rapid neutrons. Irradiation was carried out in the IRT-1000 reactor near Sofia with a pure gamma field of 3 roentgens per second after stopping the reactor, and with a mixed field involving a predominant percentage of fast neutrons at 5 roentgens per second during reactor operation. The seeds were irradiated in sealed polyethylene bags, the doses being

Card 1/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ALEXANDROV, V. F.

Plants - Respiration

Absorption by the green plant of carbon dioxide from the air. Est. v shkole no. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, December 1953, Uncl.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOSHCHIKOV, V.P.

Method of measuring photosynthesis under field conditions. Trudy Inst. fiziol. rast. 8 no.1:264-267 '53. (MLRA 6:12)

1. Krasnodarskiy gosudarstvennyy pedagogicheskiy i uchitel'skiy institut, kafedra botaniki. (Photosynthesis)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

SHIROKIKH, D.P., kandidat pedagogicheskikh nauk; IZVOZCHIKOV, V.P., kandidat sel'skokhozyaystvennykh nauk; YELENEV, L.K., kandidat biologicheskikh nauk.

Serious shortcomings of a textbook ("Principles of crop cultivation; part 1: general agriculture; textbook for grade 8 of rural secondary schools" by M.I. Dolgopolov. Reviewed by D.P. Shirokikh, V.P. Izvozchikov, and L.K. Elenev.) Biol.v shkole no.1:86-88 Ja-F '57. (MLRA 10:5)

1.Krasnodarskiy pedagogicheskiy institut.
(Agriculture) (Dolgopolov, M.I.)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOSHCHIKOV, V.P., kand.sel'skokhozyaystvennykh nauk

Demonstrating the absorption of carbon dioxide from the air by green plants. Biol. v shkole no.1:85 Ja-F '62. (MIRA 15:1)

1. Krasnodarskiy pedagogicheskiy institut.
(PLANTS--RESPIRATION)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 14134-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/AT

ACC NR: AP6000873 SOURCE CODE: UR/0181/65/007/012/3650/3652

AUTHORS: Ivakhno, V. N.; Izvozchikov, B. V.; Taksami, I. A.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Effect of pressure on the spectral distribution of the photoeffect in InSb

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3650-3652

TOPIC TAGS: indium compound, antimonide, pressure effect, photoeffect, spectral distribution, pn junction, forbidden band

ABSTRACT: Inasmuch as earlier investigations of the pressure effect on indium antimonide were limited to electric measurements, the authors have investigated the spectral sensitivity of indium antimonide under static pressure by photoelectric means. The pressure ranged from zero 8,000 kg/cm^2. The temperature was 96K. The samples were cubes measuring 1 x 1 x mm. A p-n junction was placed on the irradi-

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ACC NR: AP6000873

2

ated surface, parallel to it, at a depth 10--20 μ, which was irradiated through the hole region in which the free-hole density was $P \leq 1 \times 10^{15}$ cm^{-3}. The electronic part had a density $n = 1.2 \times 10^{15}$ cm^{-3}. The spectral characteristics were measured with a spectrograph (ZMR-2). The values of the 'red boundary' as a function of the pressure are listed for certain fixed pressure, as well as the corresponding widths of the forbidden band. The variation of the widths of the forbidden band with the static pressure was found to be independent of the pressure at an average value 14.8×10^{-6} ev/atm. This agrees well with results obtained by electric measurements. The gap itself increases linearly with the applied pressure. The photoresponse has the same wavelength dependence for all pressures. It is concluded that pressure makes transitions to the lowest levels in indium antimonide forbidden, i.e., the pressure influences primarily the levels with minimum energies, and the bands at higher energies change little in the investigated pressure range. Authors thank D. N. Nasledov and B. T. Kolomiyets for interest in the work. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 24Jun65/ OTH REF: 003

Card 2/2 Fw

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOZCHIKOV, V.A.

Studies on some electrical properties of lead oxide. Uch. zap. Ped. inst. Gerts. 169:255-263 '59. (MIRA 14:1)
(Lead oxide--Electric properties)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

41768

S/194/62/000/008/038/100
D295/D308

AUTHOR: Kosman, M.S., and Izvozchikov, V.A.

TITLE: Connection of the internal photoelectric effect in PbO with phenomena near the electrode

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1962, abstract 8-3-79 n (Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertsena, no. 207, 1961, 81-91)

TEXT: The authors have investigated the activated and non-activated photo-resistances obtained by compacting yellow lead oxide which turned to red oxide under pressure. The dependence of the potential distribution on illuminance was measured; the measurement was carried out by means of probes in fields of up to 200 V/cm, and by means of a string electrometer in more intense fields. A part of the measurements was carried out in benzene in order to eliminate the influence of humidity on conductivity. The dependence of potential jumps near the electrode on the voltage applied and on illuminance was established. The nature of the polarization phenomena, observed when the electric circuit is closed or when the field direc-

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

41226

S/194/62/000/007/081/160
D295/D308

94160

AUTHORS: Kosman, M.S., and Izvozchikov, V.A.

TITLE: Coloring of lead oxide under illumination in an electric field

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 7, 1962, abstract 7-5-3 e (Uch. zap. Leningr. gos. ped. in-ta, im. A.I. Gertsena, 207, 1961, 93 - 103)

TEXT: The coloring of PbO begins with field strengths of 10^3 V/cm near macro-defects and grain boundaries. Coloring is green or yellow PbO and blue on red PbO. As the field strength increases, the area and intensity of coloring increase and the color becomes grey. Coloring is affected by the field form but not by the material of the electrodes. In the presence of a monochromatic beam, coloring occurs on condition that the wavelength of the incident light corresponds to a region of high photo-sensitivity. Removal of moisture at a residual pressure of $\sim 10^{-3}$ mm Hg and at temperatures of 100° to 300°C resulted in increased photo-sensitivity and reduced coloring rate. Adsorbed moisture increases the susceptibility of PbO to

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9.4160 (also 1137)

S/181/61/003/001/013/042
B006/B056

AUTHORS: Kosman, M. S. and Izvozchikov, V. A.

TITLE: Photoelectric coloring of lead oxide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 1, 1961, 119-122

TEXT: The authors report on an effect discovered by them: the photoelectric coloring of polycrystalline PbO. This effect occurs only if the PbO specimen is also subjected to an electric field during exposure. From PbO powder, more than 100 specimens were pressed and thermally activated. X-ray examinations showed that red PbO has a distorted lattice, and that lines exist, which must be ascribed to yellow PbO. A noticeable coloring (blue coloring of red PbO and green coloring of yellow PbO) could be observed at an average electric field strength of 10^3 v/cm. Coloring could be observed at inhomogeneities and defects on the exposed parts of the specimen. Intensity and extent of coloring increased with increasing E and light intensity. Specimens exposed to monochromatic light displayed a noticeable coloring only at wavelengths, at which the photocurrent was comparatively strong (436, 546, 579 mμ). The character of the coloring

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Photoelectric coloring of lead oxide

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B006/B056

was independent of the electrode material, but its position depended on the electrode shape. Blue coloring occurred nearly on equipotential surfaces, and was most intensive at places of maximum E. A narrow (up to 10^{-2} cm) region round the cathode remained uncolored. The specimens, which at first were cinnamon-brown, showed apart from the blue coloring, also red coloring near the anode in the form of streamers along the field lines. The colorings turned out to be rather stable at room temperature, but when heated to 200 - 300°C, they could quickly be removed. Along with the coloring, also the temperature dependence of electrical conductivity changed. At a moderately high E, the photocurrent dropped at the beginning of coloring, and conductivity decreased. Coloring also changed the optical properties of the specimen, which was detected when studying the reflection spectra in the visible range. With coloring, the reflection coefficient decreased, and photosensitivity in the visible decreased by 40-60%. Moisture produced a considerable effect upon electrical properties and colorability. Adsorption of water vapor caused an increase of dark conductivity and a considerable decrease of photosensitivity. These specimens were, however, easily and intensively colorable. Well dried

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89280

S/181/61/003/001/013/042
B006/B056

Photoelectric coloring of lead oxide

SUBMITTED: February 18, 1960 (initially)
June 18, 1960 (after revision)

Card 4/4

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

into account the fact that the spectral dependence of the photocurrent distribution depends on the direction in which the spectrum is photographed. The spectral distributions of the photosensitivity of oxidized lead films and compressed polycrystalline samples are qualitatively similar. This shows that photosensitivity is determined by photoactive centers of one single kind, which obviously have an impurity character (except perhaps the photocurrent peaks 410, 430, and 450 mμ). To these centers belong, above all, the structural defects of the red low-temperature PbO, which can be easily established roentgenographically. They are related to the nitrogen vacancies. Theoretically, the F centers also appertain to the photoactive ones. If this is assumed, one can explain the photoelectric coloring and the good agreement between the refractive index and the red boundary of the photoeffect (which was used by Moss as a criterion of whether or not the photoactive centers are F centers). The author sought to find an analytic expression for the position of the photocurrent peaks on the wavelength scale. For this purpose, he used the formulas of Mollwo (Nachr.Ges. Wiss. Götting, 97, 1931) and Ivey (Phys. Rev. 72, 341, 1947): $\nu d^2 = 0.502 cm^2/sec$, and $\lambda_{max} = Ad^b$. If one introduces into the first formula the distances

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOZCHIKOV, V.A.

Sorption processes on photoconducting lead oxide. Fiz.tver.tela 3 no.10:3229-3238 O '61. (MIRA 14:10)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni Gertsena.
(Lead oxide--Electric properties) (Sorption)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

KOSMAN, M.S.; IZVOZCHIKOV, V.A.

Coloration of lead oxide in an electric field under the action of light. Uch.zap.Ped.inst.Gerts.no.207:93-103 '61.

(MIRA 16:5)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni A.I. Gertsena.

(Lead oxide) (Color centers) (Electric fields)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

Investigation of the... S/181/62/004/010/016/063
B108/B104

oxide displays also an irreversible increase in absorption and decrease in activation energy as temperature rises. The reversible processes are due to the metastable state of the yellow modification. Also the stratified structure of PbO has an effect since the width of the forbidden band depends on the distance between the ions in the strata; the thermal expansion is greater in the direction of the strata than perpendicularly to them. The irreversible change is associated with the activation of photoelectric sensitivity and is determined by the desorption of water vapor and the sorption of oxygen. The process of orientation of the lattice may also be responsible for the slower change in activation energy. There are 3 figures.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute imeni A. I. Gertsen)

SUBMITTED: May 11, 1962

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZVOZCHIKOV, V.A.; KOSMAN, M.S.

Photoelectric and optical properties of lead oxide. Izv. vys. ucheb. zav.; fiz. no.4:128-135 '63. (MIRA 16:9)

1. Leningradskiy pedagogicheskiy institut imeni A.I.Gertsena.
(Lead oxide—Photoelectric properties)
(Lead oxide—Optical properties)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

YEROKHIN, A.F.; [illegible], V.A., assistent, [illegible] rukovoditel' raboty

Effect of adsorption on the photoconductivity of lead oxide. Uch. zap. Ped. inst. Gerts. 239:65-68 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 00406-66 EWT(m)/EPF(c)/EWP(t)/EWP(b) IJP(c) JD/MT

ACCESSION NR: AR5014415 UR/0058/65/000/004/E086/E086

SOURCE: Ref. zh. Fizika, Abs. 4E641

AUTHOR: Bordovskiy, G. A.; Izvozchikov, V. A.

TITLE: Investigation of the kinetics of photoconductivity in lead oxide as a function of temperature

CITED SOURCE: Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, v. 239, 1964, 53-56

TOPIC TAGS: photoconductivity, lead oxide, carrier lifetime, polycrystal

TRANSLATION: The authors study the variations in the life-time (τ) of nonequilibrium current carriers in photosensitive polycrystalline red PbO. The guard ring method was used for measuring the photocurrent, which predominates in the surface layers. Square pulses were used for illumination of the specimen. The curves for buildup and decay of the photoconductivity were used for determining τ. It is shown that τ increases slowly with temperature at low injection levels, and decreases with an increase in temperature at high injection levels. F. Nad'.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 00681-66 EPF(c)/EWT(m)/EWP(b)/EWP(t) IJP(c) JD

ACCESSION NR: AP5012575 UR/0181/65/007/005/1552/1556

AUTHOR: Izvozchikov, V. A.; Kosman, M. S.; Chernyavskiy, K. A.

TITLE: Fluctuations of the photocurrent in PbO photoresistors

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1552-1556

TOPIC TAGS: lead oxide, photocurrent, photoresistor, volt ampere characteristic, oscillation

ABSTRACT: The authors observed pre-breakdown current oscillations on the superlinear section of the volt-ampere characteristic ($E \sim 10^4$ V/cm) of polycrystalline lead oxide. They were able to obtain fluctuations of the photocurrent at relatively low voltage (corresponding to the start of the sublinear dependence of the current on the voltage when the field exceeds 5×10^2 V/cm). These oscillations arise when the illumination is turned on and vanish when it is turned off. If the voltage is increased, the oscillations set in also in darkness if the circuit is closed, but their amplitude increases when the light is turned on. In the latter case therefore the oscillations exist only during the growth of the dc component of the photocurrent and stop when a certain current is reached. The higher the photoelectric sensitivity of the sample, the easier it was to obtain stable oscillations at lower voltages. It is concluded that the condition for the occurrence of oscilla-

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 14135-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/LHB

ACC NR: AP6000871 SOURC CODE: UR/0181/65/007/012/3646/3648 85 81

AUTHORS: Galantseva, M. L.; Izvozchikov, V. A.

ORG: Leningrad State Pedagogical Institute im. A. I. Gertsen (Leningradskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Some features of the kinetics of nonequilibrium conductivity of lead oxide

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3646-3648

TOPIC TAGS: lead oxide, electric conductivity, activation energy, x ray irradiation, photoconductivity, photochemistry

ABSTRACT: The authors report and interpret several phenomena observed in the investigation of nonequilibrium kinetic processes in lead oxide and induced by x-rays and visible light. These phenomena are connected with the high concentration of the capture and adhesion centers and their influence on recombination processes. High concentration of volume and surface centers with activation energy 0.05--0.05 ev were produced by mechanical and heat treatment of the samples. The

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 02225-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AR6013676 SOURCE CODE: UR/0058/65/000/010/E077/E077

63
B

AUTHOR: Kosman, M. S.; Izvozchikov, V. A.

TITLE: Pre-breakdown oscillations of the dark current and light-induced breakdown and oscillations of photocurrent in lead oxide photoresistances

SOURCE: Ref. zh. Fizika, Abs. 10E629

REF. SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 54

TOPIC TAGS: photoresistance, lead oxide, dielectric breakdown, oscillation

ABSTRACT: Periodic oscillations of the photocurrent were observed in polycrystalline samples of PbO at constant illumination in a constant field $E > 5 \times 10^2$ v/cm. The duration of the pulses was $\leq 1.5 \times 10^{-7}$ sec. The repetition frequency was 5 — 2.5 $\times 10^2$ sec^{-1}. It is proposed that the occurrence of the oscillations is connected with a redistribution of the charge in the surface traps. At fields 10^3 -- 10^4 v/cm, light-induced breakdown is observed over the surface of the sample. [Translation of abstract]

SUB CODE: 20

Card 1/1

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

ACC NR: AR6031888 SOURCE CODE: UR/0058/66/000/006/E095/E095

AUTHOR: Izvozchikov, V. A.; Bordovskiy, G. A.

TITLE: Influence of heat treatment on the photoelectric properties of lead oxide single crystal

SOURCE: Ref. zh. Fizika, Abs. 6E746

REF SOURCE: Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, no. 265, 1965, 268-277

TOPIC TAGS: lead oxide single crystal, lead oxide photosensitivity, oxygen adsorption, water desorption

ABSTRACT: The temperature curve with electroconductivity and measurements of photoconductivity shows an increase in photosensitivity of lead oxide on heating which is explained by desorption of H_2O. However, it is supposed that the main role in crystal sensitization is played by the formation of surface states during oxygen adsorption. [Translation of abstract]

SUB CODE: 20/

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

BOL[illegible]Y, G.A.; IZVOZCHIKOV, V.A.; KOSMAN, M.S., prof., nauchnyy rukovodi[illegible]l' raboty

Temperature dependence of the kinetics of photoconductivity in lead oxide. Uch. zap. Ped. inst. Gerts. 239:53-56 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

LIVCHAK, I.F. Prinimali uchastiye: LOBACHEV, P.F.; SLADKOV, S.P.; GRUDZINSKIY, M.M.; POLIKARPOV, V.F.; IZYANSKIY, A.Z.; KONSTANTINOVA, V.G.; MATVEYEVA, N.A.; STRASHNYKH, [illegible]., red.izd-va; MOCHALINA, Z.S., tekhn. red.

[Instructions for using improved sanitary equipment in large-panel buildings] Ukazaniia po primeneniiu usovershenstvovannykh sanitarno-tekhnicheskikh ustroistv v krupnoelementnykh domakh. Moskva, Gosstroiizdat, 1963. 85 p. (MIRA 16:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut sanitarnoy tekhniki.

(Sanitary engineering—Equipment and supplies)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

SOKALSKI, Zdzislaw; IZYDORCZYK, Jan

Kinetics of silver corrosion in aqueous $(NH_4)_2S$ solutions registered by the electrokinetic potential. Rocz chemii 35 no.6:1697-1708 '61.

1. Department of Physical Chemistry, Technical University, Gliwice.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

12 [illegible], Jan

Development of the provinces on the Oder River and the Baltic in all their aspects. Przegl techn 86 no.3:1, 3 17 Ja '64.

1. Vice Chairman of the Main Executive Board, Association for Development of Western Provinces, Warsaw.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ZLYKOWSKI, LOUISLAW

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYKOWSKI, Zdzislaw, dr inz.

Methods of increasing the strength and permeability of synthetic argillaceous molding mixes without changing their composition and optimal conditions of processing these masses. Przegl mech 22 no.5:154 10 Mr '63.

1. Katedra Odlewnictwa, Politechnika, Lodz.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYKOWSKI, Zdzislaw, dr inz.

Development of the foundry industry in Czechoslovakia. Przegl mech 23 no.13:375-378 10 Jl '64.

1. Head, Founding Office, Enterprise of Designing and Supply of Capital Investments, Warsaw.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYKOWSKI, Zdzislaw, dr inz.

Development in design of foundry machinery in Poland. Przegl mech 23 no.16:470-473 25 Ag '64.

1. Head, Casting Laboratory, Capital Investments Design and Supply Agency, Warsaw.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYNEYEV, A.A.; KORSHAK, V.V.; FRUNZE, T.M.; KURASHEV, V.V.

Preparation of polymers by polycyclization. Report No.2: Study of the formation of polybenzimidazoles. Izv. AN SSSR Ser.khim. no.10:1828-1836 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYNEYEV, A.A.; KORSHAK, V.V.; FRUNZE, T.M.; ALDAROVA, N.Sh.; KURASHEV, V.V.

Preparation of polymers by polycyclization reaction. Report No.3: Properties of polybenzimidazole obtained from 3,3-diaminobenzidine and diphenyl ester of sebacic acid. Izv. AN SSSR. Ser. khim. no.11:2019-2023 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

KORSAHK, V.V.; FRUNZE, T.M.; KURASHEV, V.V.; IZYNEYEV, A.A.

Reactions involved in the formation of polybenzimidazoles. Dokl.AN SSSR 149 no.1:104-106 Mr '63. (MIRA 16:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Korshak).
(Benzimidazole) (Polymerization)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

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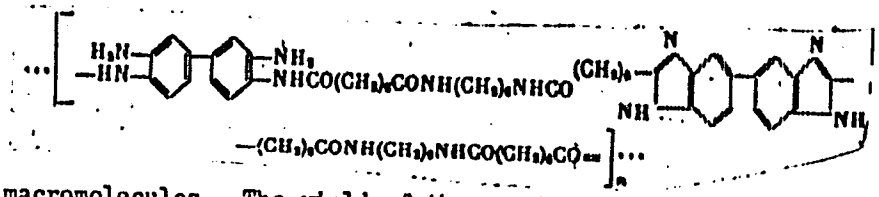

in their macromolecules. The yield of the copolymers was large and represented dark-brown, glassy material fully soluble in cold tricresol. It was found that at a 4-hour polycondensation at 250C the adjusted viscosity of 0.5% solution of the polymer (in formic acid) was 1.74, while at 270C it was 2.34. An additional 2 hours of reaction time in deep vacuum raised the adjusted viscosities of the same samples to 4.30 and 6.30 respectively. The obtained copolymers were of a medium crystalline state, their crystallinity increasing with a higher percentage of HMD. The softening temperature of the polymer depended on its composition, with a minimum occuring at 164C and at a DAB:HMD ratio of 0.2:0.8. The crystalline structure was determined at the Laboratory of X-ray Analysis of the Institute of Elementoorganic Compounds, and the thermomechanical properties were determined in the Laboratory of Polymer Investigations of the same Institute. Orig. art. has: 3 tables, 4 charts, and 4 formulas.

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L 23865-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) WW/RM

ACC NR: AP6014415 SOURCE CODE: UR/0062/66/000/004/0772/0772

35
34
B

AUTHOR: Korshak, V. V.; Izyneyev, A. A.; Vdovina, L. I.

ORG: Institute of Heteroorganic Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR); Buryat Scientific Research Institute for Comprehensive Studies, Siberian Department of the Academy of Sciences SSSR (Buryatskiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo Otdeleniya Akademii nauk SSSR)

TITLE: Synthesis of new polybenzimidazoles

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1966, 772

TOPIC TAGS: heat resistant polymer, polybenzimidazole

ABSTRACT: New polybenzimidazoles have been synthesized which exhibit both high thermal stability and solubility in a wide range of organic solvents. It is noted that polybenzimidazoles prepared heretofore were soluble in a limited number of solvents only. The new polybenzimidazoles were prepared from bis(3,4-diaminophenyl) ether and various diphenyl alkyl- or aryl-dicarboxylates in vacuum (10^{-1} mm Hg) at 260—320C. The polymers had the general formula

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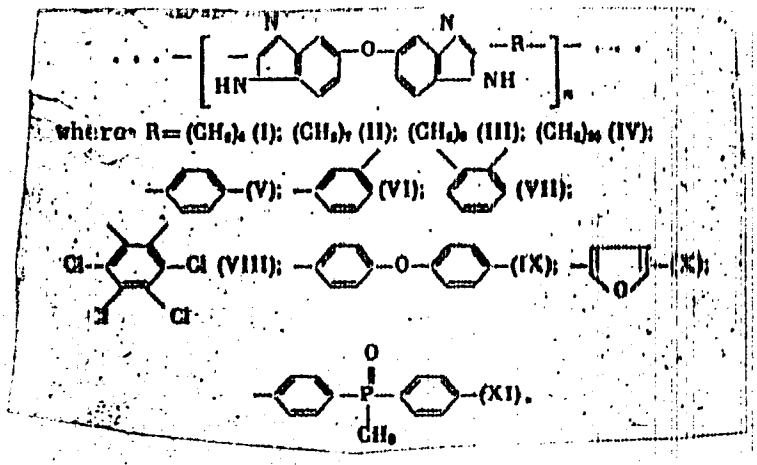
ACC NR: AP6014415



Weight loss began at 380—400C for aliphatic R (polymers I to IV) and 480—500C for aromatic R (polymers V to XI). The polymers were soluble in formic acid, dimethyl sulfoxide, dimethylformamide, and dimethylacetamide. Strong elastic films were produced from 1% solutions in concentrated formic acid. [SM]

SUB CODE: 11/ SUBM DATE: 14Jan66/ ORIG REF: 003/ OTH REF: 003/ ATD PRESS: 4246

Card 2/2 dda

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

L 35470-65
ACCESSION NR: AP5[illegible]

ASSOCIATION: Institut elementoorganicheskikh soyedinenii AN SSSR (Institute of Hetero-Organic Compounds, AN SSSR)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ACC NR: AP6015043 SOURCE CODE: UR/0190/66/008/005/0777/0782

AUTHOR: Korshak, V. V.; Manucharova, I. F.; Izyneyev, A. A.; Frunze, T. M.
ORG: Institute of Organoelemental Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy); Institute of General and Inorganic Chemistry im. N. S. Kurnakov, AN SSSR (Institut obshchey i neorganicheskoy khimii AN SSSR)

TITLE: Study of the thermal stability of several new polybenzimidazoles which contain O, P, and B in the chains, and also of mixed polyamido- and polyesterobenzimidazoles by differential thermal analysis

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 777-782
TOPIC TAGS: polymer physical chemistry, chemical stability, thermal stability, chemical decomposition, thermal decomposition

ABSTRACT: The continuous search in the USSR for thermostable and heat-resistant polymers prompted a study of the thermal stability of some newly synthesized polybenzimidazoles. The subjects of the study were the polymers obtained from 3,3'-diaminobenzidine with directly connected benzimidazole groups, and those obtained from 3,3',4,4'-tetraaminodiphenylmethane with benzimidazole groups connected by a $-CH_2-$ bridge. The polymers studied are shown in the two following tables. Table 1 contains data on polybenzimidazoles with aliphatic chains, while Table 2 fully describes aromatic polybenzimidazoles or those with heteroatoms in their structure. The synthesis of these polymers was reported previously.

Card 1/6 UDC: 678.01:53+678.6+678.86

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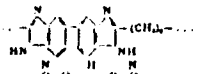
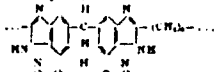
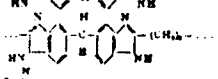
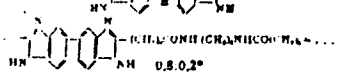
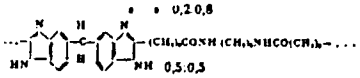
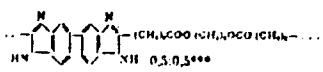
Table 1. Thermal Stability of Some Polybenzimidazoles with Polymethylene Chains

Repeat Unit and Molar Ratio	Losses in Weight, % (in nitrogen stream)					Temperature at the start of decomposition, °C	Temperature of a sharp decrease in weight, °C
	Up to 350°	Up to 400°	Up to 450°	Up to 500°	Up to 550°		
	—	—	—	10,6	32,8	460	480
	9,1	9,4	9,7	33,3	56,3	460	470
	—	—	—	29,4	55,0	460	480
 0,8:0,2*	6,4	7,3	7,7	32,9	60,2	440	460
Same 0,5:0,5	4,1	4,9	10,6	49,1	61,3	430–440	460
" " 0,5:0,5**	6,0	6,6	16,6	45,7	56,4	430–440	460
" " 0,2:0,8	10,5	13,8	23,7	92,0	95,2	320	350
 0,5:0,5	11,9	15,9	27,8	97,5	—	320	350
 0,5:0,5***	4,1	8,1	12,2	—	—	340	400

*Molar ratio of the initial components: tetraamine: diamine
**Losses in weight determined in air
***Molar ratio of the initial components: tetraamine: diol

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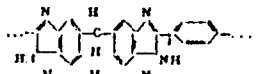
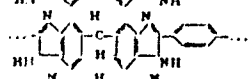
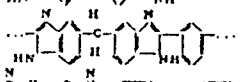
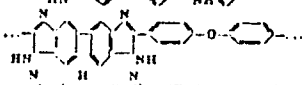
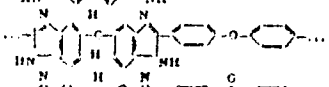
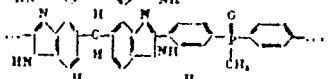
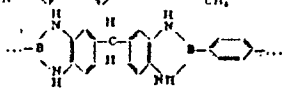
Table 2. Thermal Stability of Aromatic Polybenzimidazoles and Polybenzimidazoles Containing Heteroatoms

Repeat Unit	Losses in Weight, % (in nitrogen atmosphere)			Temperature of the start of decomposition, °C	Temperature of a sharp decrease in weight, °C
	Up to 500°	Up to 550°	Up to 600°		
	3,4	7,9	15,4	~500	530
	4,6*	6,7*	23,6*	~500	530
	5,2*	15,4*	31,3*	~490	520
	5,4	7,5	10,2	~474	520
	3,4	7,2	16,2	~500	510
	27,5	39,8	47,8	~456	500
	2,6	7,2	12,8	~450	550

*Losses in weight determined in air

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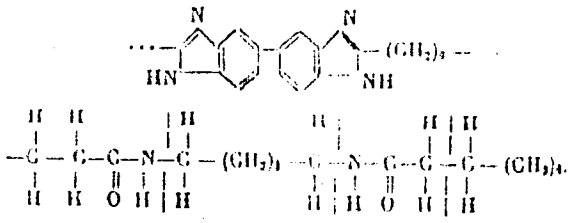
Mixed polyamidobenzimidazoles and polyesterobenzimidazoles (see Table 1) have a lower thermal stability than fully aromatic homopolybenzimidazoles, but are more resistant than the corresponding polyamides or polyesters. The decomposition of the polyamidobenzimidazoles probably takes place at the bonds indicated by the broken lines:



Heating of polybenzimidazoles to 400—320° C at 0.001 mm Hg produces insoluble substances, which can be explained as the formation of three-dimensional network structures by virtue of crosslinking of CH_2 or NH groups.

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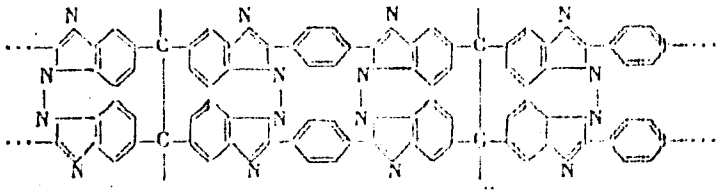
accompanied by the evolution of H_2. In the first stages of the decomposition the process can be represented as:



The rigidity of the polymers is increased, which results in an increase in thermal stability. Further, a rupture of chains takes place at a deeper decomposition. Orig. art. has: 3 figures and 2 tables. [FSB: v. 2, no. 10]

SUB CODE: 07, 20 / SUBM DATE: 17Apr64 / ORIG REF: 007 / OTH REF: 006

Card 6/6

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

SHATENSHTEYN, A.I., prof.; VYRSKIY, Yu.P., kand. khim. nauk; PRAVIKOVA, N.A., kand. tekhn. nauk; ALIKHANOV, T.F., kand. khim. nauk; ZHDANOVA, K.I., kand. khim. nauk; IZYUMNIKOV, A.L., mlad. nauchn. sotr.; LEVINSKIY, Yu.V., red.

[Practical laboratory manual on the determination of the molecular weights and molecular weight distribution of polymers] Prakticheskoe rukovodstvo po opredeleniiu molekuliarnykh vesov i molekuliarno-vesovogo raspredeleniia polimerov. [By] A.I.Shatenshtein i dr. Moskva, Khimiia, 1964. 188 p. (MIRA 18:2)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYUMNIKOV, A.L.; ESKIN, V.Ye.

Improvement of Peaker's photoelectric nephelometer. Prib. i tekh. eksp. 9 no.5:178-179 S-O '64. (MIRA 17:12)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

ESKIN, V.Ye.; IZYUMNIKOV, A.L.; ROGOZHKINA, Ye.D.; VYESKIY, Yu.P.

Composition inhomogeneity of statistical styrene - butyl methacrylate copolymers. Vysokom.soed. 7 no.7:1184-1187 Jl '65. (MIRA 18:8)

1. Fiziko-khimicheskiy institut imeni Karpova i Institut vysokomolekulyarnykh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

BLAZHNOV, A.G., inzh.; VORONTSOV, A.V., inzh.; IZYUMOV, A.A., inzh.; LYSOV, I.V., inzh.; PRAGER, V.Kh., inzh.; RYASKOV, V.I., inzh.; DEROV, V.A., tekhnik; KOSTINA, V.P., red.; LUKASHEVICH, V.K., tekhn. red.

[Over-all automation at a bearing plant] Kompleksnaia avtomatizatsiia na podshipnikovom zavode. Saratov, Saratovskoe knizhnoe izd-vo, 1962. 53 p. (MIRA 16:4)

1. Saratovskiy podshipnikovyy zavod (for all except Kostina, Lukashevich).
(Saratov--Bearing industry) (Automation)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYUMOV, A.M.; SHAN'GIN, N.N.

Sand movement in horizontal cracks formed in hydraulic fracturing of strata. Neft. khoz. 36 no.4:44-50 Ap '58. (MIRA 11:5)
(Sand) (Petroleum engineering)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

29006 IZVUNOV, A. N. Tugaynyye Pochuy Khachmazskogo Rayona Azerbaydzhanskoy SSR. Trudy Yubileynoy Sessii, Posuyashch. Izuletiyu So Dnya Pozhdeniya Dokuchayeva M - L, 1949, 2143-47 Bibliogr: 8 Nazv

SO: Letopis', no. 33, 1949

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYUMOV, A.N.

Soil erosion in the Lesser Caucasus within the Azerbaijan S.S.R. and principles underlying its control. Trudy Sekt. eroz. AN Azerb. SSR 1:21-30 '61. (MIRA 15:8)
(Azerbaijan—Erosion)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

IZYUMOV, A.N.

Soil erosion in the Nagorno-Karabakh Autonomous Province. Trudy Sekt. eroz. AN Azerb. SSR 2 :7-35 '63.

(MIRA 17:10)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619410015-4

[illegible]

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