VOL'F, L.A.; MEOS, A.I.; KAUFMAN, Kh.Ya.

Refractometric determination of concentrations of polyvinyl alcohol solutions. Khim.volok. no.1:22-23 '60. (MIRA 13:6)

1. Leningradskiy tekstil'nyy institut.
(Vinyl alcohol)

VOL'F, L.A.; MEOS, A.I.; INKINA, S.A.

Complexometric determination of sodium sulfate in precipitation baths in the manufacture of synthetic fibers. Khim.volok. no.1: 32-33 '60. (MIRA 13:6)

1. Leningradskiy tekstil'nyy institut.
(Textile fibers, Synthetic) (Sodium sulfate)

S/183/60/000/003/009/016/XX
B004/B067

AUTHORS: Vol'f, L. A. and Meos, A. I.

TITLE: Iodine Reaction of the Solutions of Polyvinyl Alcohol and Fibers and Films Produced Therefrom

PERIODICAL: Khimicheskiye volokna, 1960, No. 3, pp 21-22

TEXT: In the introduction, the authors give a survey of iodine reactions of polysaccharides, and discuss the different behaviors of starch, cellulose, glycogen, dextrin, etc. The blue color caused by iodine is explained as a reaction of the hydroxyl groups with iodine under adsorption and complex formation. The authors studied the reaction of water-soluble and hydrophobic fibers and films of polyvinyl alcohol (PVA) with I_2 and KI. The soluble products turned into an intensive blue whereas no coloring was observed after thermal stabilization (at 210°C). When previously swelled in water or borax, the thermostabilized fibers and films again turned blue. The same holds for PVA previously treated with formaldehyde. This effect of swelling is explained by a destruction of the hydrogen bonds. Like starch, also iodized PVA is decolorized when heated in boiling

Card 1/2

water; on cooling, however, it turns blue again. Dissolved PVA is coagulated by an iodine solution. The authors had iodine-PVA films and fibers studied by M. A. Mikhel'son, physician and bacteriologist. It was observed that such films and fibers are longer sterile than material sterilized at high temperatures. Hence, the authors assume that iodine - polyvinyl alcohol films and fibers can be used as medical bandaging material. There are 6 references: 3 Soviet, 2 British, 1 Canadian, and 2 German.

ASSOCIATION: LTI im. Kirova (Leningrad Textile Institute imeni Kirov)

S/183/60/000/004/003/005
B004/B058

AUTHORS: Meos, A. I., Vol'f, L. A., Tseytlina, L. A.

TITLE: Acetalation of Polyvinyl Alcohol Fibers by Means of Dialdehydes of Phthalic Acids

PERIODICAL: Khimicheskiye volokna, 1960, No. 4, pp. 18 - 20

TEXT: The authors start from data contained in Western publication (Refs. 1,2), according to which polyvinyl alcohol fibers can be made waterproof by means of formaldehyde or dialdehydes of phthalic acids. A previous heating of the fiber to 215°C is, however, prescribed in this case. It was the authors' aim to find a method by which the strong heating is avoided. Three ways are described as being possible: 1) reduction of the swelling property of the fiber by coagulating substances; 2) gradual temperature increase of the dialdehyde solution; 3) addition of substances which combine the aldehydes in the first stage of the process. The paper under review reports on the results according to 1) and 2). Polyvinyl alcohol fiber, obtained from the Leningradskiy nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass

Card 1/3

Acetalation of Polyvinyl Alcohol Fibers by Means of Dialdehydes of Phthalic Acids

S/183/60/000/004/003/005
B004/B058

(Leningrad Scientific Research Institute of Polymerization Plastics) was submitted to thermal stabilization at 210°C and subsequent treatment at 70°C with a solution of 38% methanol, 20% sulfuric acid, 39% water, and 3% terephthalic acid- or isophthalic acid dialdehyde. In a second test series, thermal stabilization was replaced by a three-hour treatment with a solution of sodium sulfate (350 g/l) at 70°C, followed by a treatment with dialdehyde, as in the first test series. The property of the fiber was evaluated on the basis of its shrinkage in length. The results are given in Table 1. The shrinkage of the thermally pretreated fiber amounted to 30.5%, that of the fiber treated with sodium sulfate 40.5-46.9%. When acetalating by means of formaldehyde, sodium sulfate produced far too big a shrinkage compared with thermal stabilization (Table 2). The authors explain the better effect of dialdehydes by the formation of intramolecular cross links, while intramolecular rings only result with formaldehyde. Acetalation by means of isophthalic acid dialdehyde was performed next under the following conditions: 2.5 h each at 3-5°C and 8-15°C, 30 min each at 15-40°C and 40-70°C, and 3 h at 70°C. After that, the total shrinkage of the fiber amounted to 15.5% only. On the basis of new experimental data, the authors concluded that the duration

Card 2/3

of treatment by this method can be further shortened. There are 2 tables and 2 non-Soviet references.

ASSOCIATION: LTI imeni S. M. Kirova (Leningrad Textile Institute imeni S. M. Kirov)

S/183/60/000/005/004/007
B028/B054

AUTHORS: Vishnyakova, M. N., Meos, A. I.

TITLE: Study of the Structure of Caprone Fibers by Electron-microscopic Methods

PERIODICAL: Khimicheskiye volokna, 1960, No. 5, pp. 20-24

TEXT: Preparations for these studies were crushed in a micromill of the type ЭМИБ(EMIB) during 30-90 min at 5,000 rpm. The electron-microscopic pictures are 6,000-fold magnifications of the preparations. The structure of raw caprone resin shows macromolecular coils forming on casting and hardening. The thickness of the coils is difficult to determine because of node formation. The thickness of the structural elements is ~1,000 A. In some cases, the unstretched caprone fiber shows strongly bent macromolecular coils as they also appear in raw resin. A molecular coil has an average thickness of 750 A. Spherolites appear in structural analyses of stretched caprone rayon fibers. Average thickness of macromolecular coils in the stretched fiber is about 660 A. Cord fiber is usually stretched to the 4 1/2-fold, and therefore shows a better orientation of structural

Card 1/2

Study of the Structure of Caprone Fibers by Electron-microscopic Methods

S/183/60/000/005/004/007
B028/B054

elements, and macromolecular coils of a mean thickness of 540 A. Thus, the authors found that cord fibers, as well as stretched and unstretched fibers, have different structures; fibers directly drawn from resin have much thicker macromolecular coils than fibers obtained from a solution. Structural differences, however, decrease with increasing stretching. Stretched and unstretched rayon fibers show spherolites which were not observed in cord fibers. There are 9 figures and 6 references: 3 Soviet, 1 German, 1 Swiss, and 1 Swedish.

ASSOCIATION: LTI imeni S. M. Kirova (Leningrad Textile Institute imeni S. M. Kirov)

Card 2/2

MEOS, A.I.; VISHNYAKOVA, M.N.; BYKOVA, Ye.A.

Solution of cellulose and other polymeric materials. (MIRA 15:12)
Trudy LTA no.91:27-31 '60.

1. Leningradskiy tekstil'nyy institut imeni Kirova.
(Polymers) (Cellulose)
(Solution (Chemistry))

VOL'F, L.A.; MEOS, A.I.; INKINA, S.A.; GUS'KOV, L.I.

Causes of the yellowing of vinol (vinylon) in the course of its thermal treatment, and means for its prevention. Khim.volok. no.1: 19-21 '61. (MIRA 14:2)

1.Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Vinylon)

VOL'F, L.A.; MEOS, A.I.; INKINA, S.A.

Modified method for the complexonometric determination of components in precipitation baths. Khim.volok. no.3:33-35 '61. (MIRA 14:6)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Viscose)
(Complex ions)

MEGS, A.I.; VOL'F, L.A.; VERESHCHAK, L.P.

Action of salt solutions on freshly formed polyvinyl alcohol fibers. Khim.volok. no.5:21-23 '61. (MIRA 14:10)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Textile fibers, Synthetic) (Vinyl alcohol polymers) (Salts)

S/183/61/000/006/002/002
B101/B110

AUTHORS: Tseytlina, L. A., Meos, A. I., Vol'f, L. A.

TITLE: Production of flameproof polyvinyl alcohol fibers and fabrics

PERIODICAL: Khimicheskiye volokna, no. 6, 1961, 22-24

TEXT: The authors report on attempts to produce flameproof textiles by direct phosphorylation of polyvinyl alcohol fibers or fabrics with $POCl_3$. The fiber was heated in air at 210°C for 5 min, and then treated at 70°C for 40 min in a bath of 4% HCOH, 20% H_2SO_4, and 25% Na_2SO_4. After rinsing and drying, there followed a 3-hr treatment in a bath of $POCl_3$ dissolved in $CHCl_3$, then repeated rinsing with ethanol, the last one with 5% ethanolic solution of NH_3. The P content of the fiber, after its decomposition in concentrated H_2SO_4, was determined by the molybdate method according to W. A. Pons et al. (see below). The P content could be changed by changing the concentration of $POCl_3$. The P content of the fiber was found to increase rapidly up to about 5.3% with an increase of the $POCl_3$ concentration from 0.5 to 2%. Further increase of the $POCl_3$ concentration up to

Card 1/3

Production of flameproof ...

25% caused only an additional increase of the P content of the fiber by about 1%. Data on fibers with different P content: (1) 1.94% P, breaking length 16.1 km, elongation 43%, burns for 1 sec after removing the igniting flame and is then extinguished without smoldering; (2) 6.02% P, breaking length 14.7 km, elongation 67%, does not burn nor smolder; (3) polyvinyl alcohol fabric vinol treated with 10% $POCl_3$ solution. P content 4.23%, does not burn nor smolder. With increasing P content, the fabrics change color until they get brown. P must be present in the fiber as NH_4 salt or acid ester, in order to have a flameproofing effect. Treatment with hard water leads to the formation of Ca and Na phosphates, whereby the flameproof property gets lost, which can be restored by treatment with 5% NH_4Cl solution. Replacement of $CHCl_3$ by CH_2Cl_2, rinsing with H_2O instead of C_2H_5OH, and shortening the duration of phosphorylation also produced positive results. There are 1 figure, 1 table, and 10 references: 1 Soviet and 9 non-Soviet. The four most recent references to English-language publications read as follows: G. L. Drake, jr., W. A. Reevs, J. D. Guthrie, Text. Res. J., 29, 270 (1959); S. R. Hobart, G. L. Drake, jr., J. D. Guthrie, Text. Res. J., 29, 844 (1959); J. C. Daul,

Card 2/3

Production of flameproof ...

S/183/61/000/006/002/002
B101/B110

J. D. Reid, R. M. Reinhardt, Ind. Eng. Chem., 46, 1042 (1954); W. A Pons, jr., M. F. Stansbury, C. L. Hoffpauir, J. Assoc. Offic. Agr. Chemist, 36, 492 (1953).

ASSOCIATION: LTI im. S. M. Kirova (LTI imeni S. M. Kirov)

Card 3/3

VEYDEMAN, Ye.B.; MEOS, A.I.

Means for reducing the amount of hydrogen sulfide liberated in the action of spinning bath on viscose. Khim.volok. no.6:39-41 '61. (MIRA 14:12)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Hydrogen sulfide) (Viscose)

MEOS, A.I., VISHNYAKOVA, M.N.

Electron-microscopic study of the supermolecular structure of some chemical fibers.

Report presented at the 13th Conference on High-molecular compounds Moscow, 8-11 Oct 62

AFANAS'YEVA, G.N., MEOS, A.I., VOL'F, L.A.

Method of producing high-strength polyvinyl alcohol fibers.

Report presented at the 13th Conference on high-molecular compounds Moscow, 8-11 Oct 62

MEOS, Aleksandr Ivanovich; ROSKIN, Ye.S., red.; FREGER, D.P., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Properties and use of synthetic fibers]Svoistva i primenenie sinteticheskikh volokon. Leningrad, 1962. 26 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Sinteticheskie materialy, no.6) (MIRA 15:12)

(Textile fibers, Synthetic)

VEYDEMAN, Ye.B.; MEOS, A.I.

Effect of sodium sulfite on the reaction of carbon disulfide with alkali. Izv.vys.ucheb.zav.;khim.i khim.tekh. 5 no.3:477-479 '62. (MIRA 15:7)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova, kafedra tekhnologii khimicheskikh volokon.

(Carbon disulfide)
(Alkalies) (Sodium sulfite)

TATEVOSYAN, Ye.L.; MAKAROVA, T.P.; MEOS, A.I.

Effect of the conditions of mercerization and of cellulose quality on filterability during continuous mercerization. Khim.volok. no.1:30-33 '63. (MIRA 16:2)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Tatevosyan, Makarova).
2. Leningradskiy tekstil'nyy institut (for Meos).
(Mercerization) (Cellulose) (Filters and filtration)

MECS, A.I.; VOL'F, L.A.; AFANAS'YEVA, G.N.

New type of insoluble fibers made from polyvinyl alcohol. (MIRA 16:7)
Khim. volok. no.3:18-20 '63.

1. Leningradskiy tekstil'nyy institut.
(Textile fibers, Synthetic)
(Polyvinyl alcohol)

AFANAS'YEVA, G.N.; VOL'F. L.A.; MEOS, A.I.; GORBACHEVA, V.O.; MIKHAYLOV, N.V.; MIL'KOVA, L.P.

Thermoplasticization stretching of polyvinyl alcohol fibers. Khim. volok. no.5:16-19 '63. (MIRA 16:10)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova (for Afanas'yeva, Vol'f, Meos). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Gorbacheva, Mikhaylov, (Mil'kova).

L 18408-63 EWP(j)/EWT(m)/BDS AFFTC/ASD Pc-4 RM/MAY
ACCESSION NR: AP3006186 S/0080/63/036/007/1587/1591

65
62

AUTHORS: Afanas'yeva, G. N.; Vol'f, L. A.; Meos, A. I.; Slutsker, A. I.; Frenkel', S. Ya.

TITLE: Analysis of the orientation of highly-ordered regions in strengthened fibers prepared from polyvinyl alcohol. 15

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 7, 1963, 1587-1591

TOPIC TAGS: high-temperature extrusion, plastics, X-ray diffraction

ABSTRACT: Authors studied the orientation of hardened fibers and compared the obtained results with freshly prepared and untreated fibers. They hoped by this to either prove or disprove the effect of hydrogen bonding and the orientation on the rigidity and solubility of these fibers in water which were prepared from polyvinyl alcohol. The orientation of highly aligned crystallites were evaluated by X-ray diffraction by both a photographic method and ionization registration method. It was shown that the analyzed polyvinyl alcohol fibers are highly crystalline and that the crystallites are

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ACCESSION NR: AP3006186

oriented around the fiber axis or C-axis of its elemental cells. Thus, the results of X-ray diffraction analysis showed that, during thermoplastication stretching, some structural changes take place, resulting in a considerable increase of crystallite orientation as well as of rigidity. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Leningradskiy tekstil'ny*y institut imeni S. M. Kirova (Leningrad textile institute), Institut vy*sokomolekulyarny*kh soyedineniy, AN, SSSR (Institute of high-molecular compounds, AS, SSSR), Leningradskiy fiziko-tekhnicheskiy institut imeni A. F. Ioffe, AN, SSSR (Leningrad physics-engineering institute)

SUBMITTED: 19Dec62 DATE ACQ: 25Sep63 ENCL: 00
SUB CODE: CH, MA NO REF SOV: 004 OTHER: 002

BUDYLOV, A.V.; VOL'F. L.A.; MEOS, A.I.; MAKAROVA, T.P.; SHEMKOV, N.K.

Studying the kinetics of the formation of the structure of polyvinyl alcohol fibers. Khim. volok. no.2:24-27 '64. (MIRA 17:5)

1. LITiLP im. S.M. Kirova (for Budylov, Vol'f, Meos).
2. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Makarova).
3. Leningradskiy zavod iskusstvennogo volokna (for Shemkov).

ACCESSION NR: AP4027716 S/0183/64/000/002/0043/0048

AUTHORS: Meos, A.I.; Vishnyakova, M.N.; Dumitrin, M.

TITLE: The action of modifiers in forming supermolecular structures of viscose fibers

SOURCE: Khimicheskiye volokna, no. 2, 1964, 43-48

TOPIC TAGS: viscose fiber, formation, supermolecular structure, modifier, cyclohexylamine, polyethyleneglycol, hydroxyethylated amine, zinc sulfate, mechanism, electron microscope, production condition, tire cord, fiber uniformity, fiber strength, pH control, structure forming zone, buffer, cellulose xanthate

ABSTRACT: The structures of viscose fibers obtained by adding modifiers (cyclohexylamine, polyethyleneglycol and hydroxyethylated amines) to the viscose were examined with an electron microscope in order to determine conditions most suitable for the production of uniform tire cord. A mechanism for the action of the modifiers is proposed. The structure of fibers which were most uniform were produced from viscose containing modifiers and an increased zinc

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ACCESSION NR: AP4027716

sulfate content and had low acidity in the settling bath; these structural elements were well formed and have smaller and more uniform diameters than fibers formed under other conditions. The proposed mechanism for the action of modifiers is that they help maintain the proper pH in the active structure-forming zone, forming onium compounds in an acid medium and destroying them in alkali. In the settling bath the zinc also acts as a buffer. The modifier acts as buffer on the surface and zinc acts on the internal half of the active structure forming zone. Besides acting as buffer, the modifier changes the solubility of the cellulose xanthate, forming an ample number of centers for the formation of structural elements which in turn leads to the formation of small diameter structural elements. It is concluded that the well-formed sections of macromolecules indicate that zinc xanthate is not formed in the structure-forming process; the zinc sulfate neutralizes the caustic in the viscose jets. Increasing the acidity of the settling bath accelerates the viscose fiber forming processes to such an extent that the buffering action of the modifier and zinc are suppressed and the structure forming zone is extremely small. Orig. art. has: 4 figures and 7 equations.

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ACCESSION NR: AP4027716

ASSOCIATION: LITLP im. S. M. Korova (Leningrad Institute for the

SUBMITTED: 28May63 DATE ACQ: 22Apr64 ENCL: 00

SUB CODE: MT NR REF SOV: 007 OTHER: 005

Card 3/3

ACCESSION NR: AP4015058 S/0026/64/000/001/0082/0084

AUTHOR: Vol'f, L. A. (Candidate of chemical sciences); Maos, A. I. (Professor)

TITLE: An antiseptic fiber

SOURCE: Priroda, 53 no. 1, 1964, 82-84

TOPIC TAGS: textile, fiber, fabric, germicide, fungicide, antiseptic, Letilan, Biolan, Iodin

ABSTRACT: New antiseptic fibers — Letilan, Biolan and Iodin -- have been developed by the special problems laboratory of the Leningradskiy tekstil'ny*y institut im. S. M. Kirova (Leningrad Textile Institute). The method of fiber treatment consists in the chemical bonding of reagent and fiber. These fibers not only are germproof and fungus-proof but also, for the comparatively small group of microorganisms so far investigated, possess germicidal and fungicidal properties effective practically throughout the life of a finished article. Especially effective is Letilan, created jointly with a group of coworkers from the Institut organicheskogo sinteza (Institute of Organic Synthesis), Academy of

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ACCESSION NR: AP4015058

Sciences Latvian SSR, headed by Academician S. A. Giller. Results are summarized in Figures 1-4 of the Enclosure. Investigation is continuing to determine the full range of these fibers' antiseptic effectiveness, as well as any possible side effect on the human and animal organism. Orig. art. has 4 figures.

ASSOCIATION: Leningradskiy tekstil'nyy institut im. S. M. Kirova (Leningrad Textile Institute)

SUBMITTED: 00 DATE ACQ: 03Mar64 ENCL: 04

SUB CODE: MA, CH NO REF SOV: 000 OTHER: 000

Card 2/2

L 6636-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 86
Pb-4 BSD/ASD(a)-5 WW/RM 82

ACCESSION NR: AP4040527 S/0080/64/037/006/1349/1355

AUTHOR: Afanas'yeva, G. N.; Bessonov, M. I.; Vol'f, L. A.; Meos, A. I.; Frenkel', S. Ya.

TITLE: Study of the thermomechanical properties of high strength polyvinylalcohol fibers by the isometric method

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 6, 1964, 1349-1355

TOPIC TAGS: polyvinylalcohol fiber, high strength fiber, isometric test method, thermomechanical property, thermally stabilized fiber, cord fiber, acetalated fiber, heat stretched fiber, fiber stretching, fiber shrinkage, elongation, chemically treated fiber, orientation, fiber orientation index

ABSTRACT: The physical and technological properties of high strength polyvinylalcohol (PVA) fibers obtained by thermally plasticized stretching at temperatures near the softening temperature were studied. Tests were run on an automatic apparatus provided with a highly sensitive compensating dynamometer, as described by A. P. Rudakov [Avtomatizirovanny*y dinamometr dla ispy*taniya plenok i volokon i opy*t ego ispol'zovaniya. (Automated dynamometer for testing films and fibers

Card 1/4

and testing of its applications), IX nauchnaya konferentsiya IVS AN SSSR]. Tests were run in air and in inert atmosphere at different rates of heating on freshly formed fiber, on cord fiber, on fiber subjected to thermal stabilization and fiber acetalated with formaldehyde. The heat-formed stresses in rigidly fixed samples heated at 2.7 C/min. are shown in fig. 1. The low temperature maxima resulted from drying the fiber; the high temperature maxima are characteristic of the degree of fiber orientation. The magnitude of the stress at the maximum can serve as an index to the oriented state of the fiber. The hot-stretched fiber has the best indexes for the degree of orientation and also for modulus of elasticity, deformation and other parameters determining the performance of fibers in a wide temperature range. The untreated and chemically treated fibers do not show sharp maxima. The low values in the formaldehyde-treated fiber are indicated due to the limited segmental mobility of the macromolecules bound to the acetal bridges; the rise at 235-240C is due to the breaking of these bridges. At a greater rate of heating the maxima are shifted somewhat toward higher temperatures. The high strength fiber shows no deformation when subjected to small loads (1.76 kg/mm^2) at regularly increased temperature, until the 200-220C range, where it actually shrinks. Shrinkage stops as the temperature approaches 240C, the softening point of the

L 6636-65
ACCESSION NR: AP4040527

2

polymer. At higher loadings (5.27, 10.53 kg/mm^2) the relaxation stresses of the fiber are exceeded at 80 and 60C causing some elongation, but the high strength fiber still retains most of its properties up to 180-190C. Orig. art. has: 5 figures.

ASSOCIATION: Leningradskiy tekstil'ny*y institut imeni S. M. Kirova i (Leningrad Textile Institute); Institut vy*sokomolekul yarny*kh soyedineniy AN SSSR (Institute of Macromolecular Compounds)

SUBMITTED: 09May63 ENCL: 01

SUB CODE: MT NO REF SOV: 007 OTHER: 002

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L 6636-65
ACCESSION NR: AP4040527

ENCLOSURE: 01

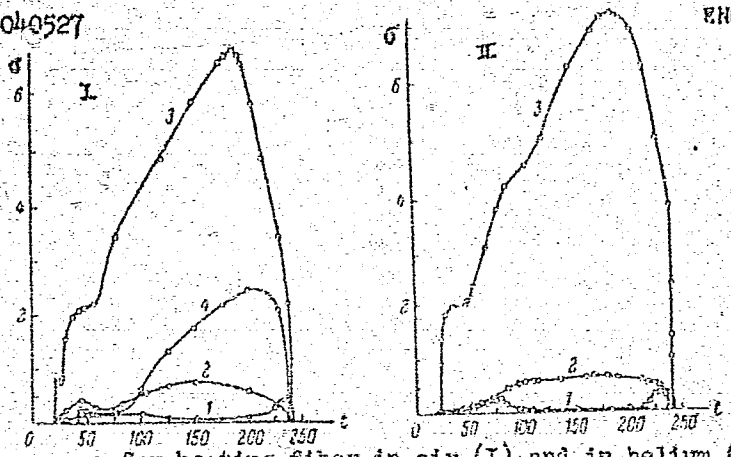

Fig. 1. Isometric curves for heating fiber in air (I) and in helium (II). t--temperature (°C), σ-loading (kg/mm²). Fiber: 1--reacted with formaldehyde; 2--original (freshly prepared); 3--high strength; 4--cord fiber.

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L 35567-65 EWP(J)/EWT(m)/T Pc-4 RM

ACCESSION NR: AP5008186 S/0286/65/000/005/0062/0062

AUTHORS: Vol'f, L. A.; Maos, A. I.

TITLE: A method for modifying fibers and films. Class 29, No. 168849

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 62

TOPIC TAGS: fiber, film, antisepsis, bactericide, ion source

ABSTRACT: This Author Certificate presents a method for modifying fibers and films by treating them with antiseptics. To obtain fibers or films with bactericidal properties, hydrophobic fibers and films are first treated at 70C with ionogenic and then with antiseptic substances.

ASSOCIATION: none

SUBMITTED: 28Feb62 ENCL: 00 SUB CODE: GC, MT, IE

NO REF SOV: 000 OTHER: 000

Card 1/1

L 21063-65 EWP(j)/EWT(m)/T Pc-4 RM

ACCESSION NR: AP5002429 S/0286/64/000/024/0030/0030

AUTHOR: Vol'f, L. A.; Meos, A. I.; Burinskiy, S. V. 16 B

TITLE: Chemical treatment of poly(vinyl alcohol) fibers. Class 29, No. 166997 16

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1964, 30

TOPIC TAGS: fiber, poly(vinyl alcohol), fiber treatment

ABSTRACT: An Author Certificate has been issued for a process for the chemical treatment of poly(vinyl alcohol) fibers. The fibers are treated with formaldehyde in water in the presence of sulfuric acid, sodium sulfate, and hydroquinone. Hydroquinone is added to produce fibers and fabrics which have electron-exchange [sic] properties.

ASSOCIATION: none

Card 1/2

L 21062-65

ACCESSION NR: AP5002429

SUBMITTED: 14Sep63 ENLC: 00 SUB CODE: MT, GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3165

Card 2/2

ACCESSION NR: AP4036832 S/0286/64/000/009/0075/0075

AUTHOR: Vol'f, L. A.; Moos, A. I.; Inkina, S. A.

TITLE: A method for producing modified resins and antistatic fibers. Class 39, No. 162314

SOURCE: Byul. izobr. i tovar. znakov, no. 9, 1964, 75

TOPIC TAGS: resin, fiber, artificial fiber, antistatic fiber, modified resin, polyvinyl alcohol, cation, cation resin, cation exchange resin

ABSTRACT: This author's certificate introduces a method for producing modified resins and antistatic fibers based on polyvinyl alcohol. In order to give them cation exchange properties, the resin and articles made from polyvinyl alcohol are treated with benzaldehyde-2,4-disulfonic acid.

ASSOCIATION: none

SUBMITTED: 03Mar61 DATE ACQ: 02Jun64 ENCL: 00

SUB CODE: OC, MT NO REF SOV: 000 OTHER: 000

Card 1/1

I 32385-65 EWT(m)/EWP(j), T Pc-4 RM

ACCESSION NR: AP5007177 S/0286/65/000/003/0045/0045

AUTHOR: Vol'f, L. A.; Meos, A. I.; Shimanskiy, P. Ye.

TITLE: A method for producing acetalated polyvinyl fiber. Class 29, No. 167949

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 45

TOPIC TAGS: polyvinyl, fiber

ABSTRACT: This Author's Certificate introduces a method for producing acetalated polyvinyl fiber by treating fibers from polyvinyl alcohol with an acetalating aldehyde in an aqueous medium. In order to expand the assortment of fibers based on polyvinyl alcohol, benzaldehyde is used as the acetalating aldehyde.

ASSOCIATION: none

SUBMITTED: 25Feb63 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

L 11372-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP4047043 S/0286/64/000/018/0044/0044

AUTHOR: Meos, A. I.; Vol'f, L. A.; Podlesskaya, N. K.; Orlov, N. F.; Voronkov, M. G.

TITLE: Method for the chemical treatment of previously heat-stabilized poly(vinyl alcohol) (PVA) fibers and fabrics. Class 29, No. 165273

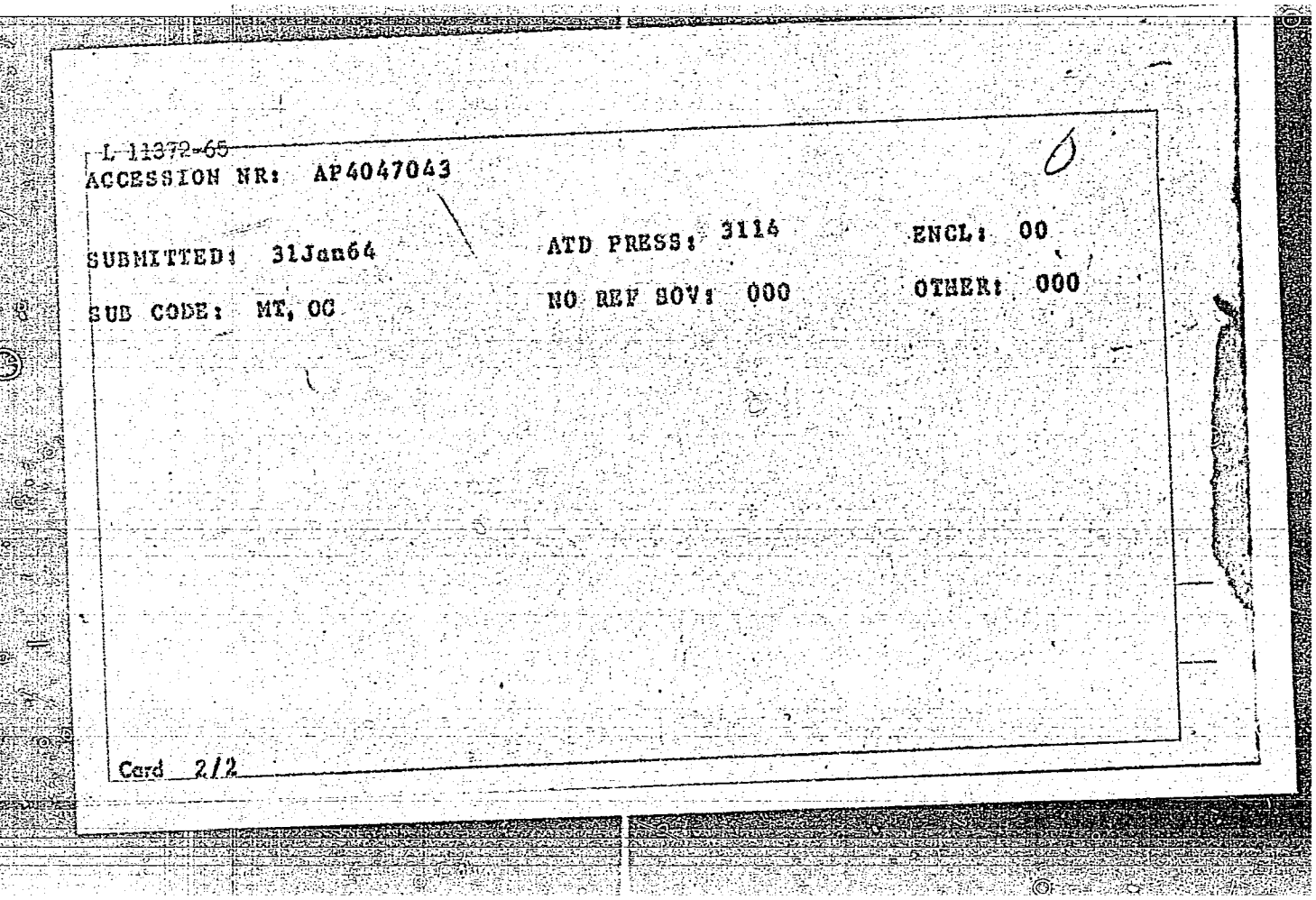
SOURCE: Byul. izobr. i tovar. znakov, no. 18, 1964, 44

TOPIC TAGS: water repellancy, polyvinyl alcohol, polyvinyl alcohol fiber, polyvinyl alcohol fabric, silicone, finish

ABSTRACT: An Author Certificate has been issued for a method for treatment of previously heat-stabilized poly(vinyl alcohol) fibers and fabrics with a water-repellant finish. In order to enhance the water repellancy of the fibers and fabrics, organosilicon compounds of the alkylsiliconate [sic] or alkylsiloxane type are used.

ASSOCIATION: -none

Card 1/2



L 11372-65
ACCESSION NR: AP4047043

SUBMITTED: 31Jan64 ATD PRESS: 3114 ENCL: 00

SUB CODE: MT, OC NO REF SOV: 000 OTHER: 000

Card 2/2

MEOS, A.I. Artificial fibers (USSR)

6153314 RGP 21 Jan 64

Identified: Under the direction of doctor of technical sciences, Prof. A.I. MEOS, the scientists of the institute (Inst of Textile and Light Ind imeni S.M. Kirov) have produced, on a base of polyvinyl alcohol, a fiber having double the strength of steel wire.

(Leningradskaya Pravda, 26 Nov 63)

SO:JPRS: 23,340, 24 February 1964, USSR Industrial Development, #148

VEYDEMAN, Ye.B.; BYKOVA, Ye.A.; MEOS, A.I.

Effect of sodium sulfite on viscose property changes during ripening. Khim. volok. no.3:32-34 '64. (MIRA 17:8)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti im. S.M. Kirova.

POLYAK, A.B.; TATEVOSYAN, Ye.L.; KUPTSAN, N.A.; MEOS, A.I.

Changes in the conformation of cellulose links occurring during mercerization and pre-riping. Khim. volok. no.4:38-41 '64. (MIRA 18:4)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova (for Polyak).
2. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Tatevosyan, Kuptsan).
3. Leningradskiy institut tekstil'noy i legkoy promyshlennosti im. S.M.Kirova (for Meos).

VOL'F, L.A.; MEOS, A.I.; PEREPELKIN, K.Ye.; UTEVSKIY, L.Ye.

Studying the thermomechanical properties of extra-strong polyvinyl alcohol fibers in water. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.5:11-15 '64. (MIRA 18:1)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni S.M.Kirova.

TATEVOSYAN, Ye.L.; MAKAROVA, T.P.; KUPTSAN, N.A.; MEOS, A.I.

Effect of the conditions of the continuous basic treatment of cellulose on the rate of its oxidative degradation. Khim. volok. no.6:33-36 '64. (MIRA 18:1)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Tatevosyan, Makarova, Kuptsan).
2. Leningradskiy tekstil'nyy institut imeni Kirova (for Meos).

MEOS, I., doktor tekhn. nauk; VOL'F, L.A., kand. khim. nauk; LEPIN, A.E., red.

[New synthetic fibers; production of fibers from polyvinyl alcohol] Novye sinteticheskie volokna; proizvodstvo volokon iz polivinilovogo spirta. Leningrad, Lenizdat, 1965. 50 p. (MIRA 18:9)

VEYDEMAN, Ye.B.; MEOS, A.I.

Formation of sulfides in the reaction of carbon disulfide with the bases. Khim. volok. no.2:34-36 '65. (MIRA 18:6)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti im. S.M. Kirova.

MEOS, A.I.; VOLF, I.A.; [illegible]

Obtaining water [illegible] esterification [illegible] prom. no.3:108-[illegible] (MIRA 18:8)

I. Leningradskiy [illegible] imeni Kirova.

TSEYTLINA, L.A.; YANOVSKAYA, N.B.; VOL'F, L.A.; MEOS, A.I.

Phosphorylation of polyvinyl alcohol fibers "vinol" in the presence of tertiary bases. Khim. volok. no.4:16-19 '65.
(MIRA 18:8)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti im. S.M. Kirova.

L 51528-65 EWT(m)/EWG(m)/EWP(j)/T Pc-4 RWH/RM UR/0286/65/000/009/0070/0070

ACCESSION NR: AP5015309 678.744.72-9^00-678-9

25
B

AUTHOR: Burinskiy, S. V.; Vol'f, L. A.; Meos, A. I.

TITLE: A method for producing an electron exchanger based on polyvinyl alcohol fibers/ Class 39, No. 170681

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 70

TOPIC TAGS: resin, polyvinyl alcohol, synthetic fiber, formaldehyde, hydroquinone, inorganic acid, catalysis

ABSTRACT: This Author's Certificate introduces a method for producing an electronic exchanger based on polyvinyl alcohol fibers by treating these fibers in hydroquinone and formaldehyde in an aqueous medium using inorganic acids as a catalyst. The electron exchanger is produced in the form of fibers and fabrics with satisfactory static capacity by using orthophosphoric acid as the inorganic acid.

ASSOCIATION: none

Card 1/2

L 51528-65
ACCESSION NR: AP5015309

SUBMITTED: 09Mar64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 000 OTHER: 000

Card 2/2

TATEVOSYAN, Ye.L.; MAKAROVA, T.P.; MEOS, A.I.

Characteristics of alkali cellulose prepared by the continuous method. Khim. volok. no.4:26-29 '65. (MIRA 18:8)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna i Leningradskiy tekstil'nyy institut im. S.M. Kirova.

L 65139-65 EWT(m)/EWP(j)/T RM

ACCESSION NR: AP5021585 UR/0286/65/000/013/0056/0056

AUTHORS: Kharit, Ya. A.; Meos, A. I.; Vol'f, L. A.; Vesa, V. S.

TITLE: A method for obtaining water-resisting polyvinyl alcohol and its products. Class 29, No. 172450

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 56

TOPIC TAGS: alcohol, polyvinyl alcohol, acetylizing agent

ABSTRACT: This Author Certificate presents a method for obtaining water-resisting polyvinyl alcohol and its products by treating them with an acetylizing agent. To improve the properties of the materials produced, derivatives of Δ^5-cyclohexene are used as the acetylizing agent.

ASSOCIATION: none

SUBMITTED: 16Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 2947-66 EPA(s)-2/EWT(m)/EWP(j) RM

ACCESSION NR: AP5025005 UR/0286/65/000/016/0064/0064

AUTHOR: Meos, A. T.; Vol'f, L. A.; Kirilenko, Yu. K.

TITLE: Chemical treatment method for poly(vinyl alcohol). Class 29, No. 173876.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 64

TOPIC TAGS: polyvinyl alcohol, organic semiconductor, semiconducting polymer, dehydration

ABSTRACT: An Author Certificate has been issued for a chemical treatment method for poly(vinyl alcohol) involving dehydration on heating in an inert medium. To impart water resistance, thermal stability, semiconducting and other special properties to poly(vinyl alcohol) end products, the dehydration is carried out in a heterogeneous medium with dehydrating agents such as acid salts of alkali metals or benzenesulfonic acid. [SM]

ASSOCIATION: none

SUBMITTED: 23Jun64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4110

Card 1/1 BVK

AFA[illegible], [illegible]; [illegible], [illegible]; [illegible], [illegible]; MEG[illegible], A.I.; [illegible], [illegible].Ya.

[illegible] method of studying the thermal and mechanical properties of extrastrong polyvinyl alcohol fibers. Zhur. prikl. khim. [illegible] 1349-1355 Je '64. (MIRA [illegible]:3)

1. [illegible] imeni Kirova i [illegible] vysoko-molekulyarnykh soyedineniy AN SSSR.

VOL'F, L.A.; [illegible], A.I.; [illegible], S.A.

Effect of the components of accumulating baths on the process of treatment of polyvinyl alcohol fibers by aldehydes. Zhur. prikl. khim. 37 no.6:1384-1386 Je '64. (MIRA 18:3)

L 57776-65 EWP(j)/EWT(m)/T Pc-4 RM
ACCESSION NR: AP5017785 UR/0080/65/038/007/1638/1638
547.361.2+541.64

AUTHOR: Kirilenko, Yu. K.; Vol'f, L. A.; Meos, A. I.; Girdyuk, V. V.

TITLE: Diels-Alder modification of poly(vinyl alcohol) and of fibers made from it

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 7, 1965, 1638

TOPIC TAGS: polyvinyl alcohol, modified polymer, ion exchange polymer, diene, dienophile, diene addition

ABSTRACT: Poly(vinyl alcohol) and poly(vinyl alcohol) fibers were partially dehydrated and then allowed to react with maleic anhydride. The resulting Diels-Alder adduct had some cation-exchange capacity (up to 6 mg-equiv/g). Reaction with other dienophiles (e.g., p-benzoquinone, acrylonitrile, acrylic acid, acrolein) can impart new properties to poly(vinyl alcohol) and fibers made from it. [VS]

Card 1/2

L 57776-65
ACCESSION NR: AP5017785

ASSOCIATION: Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni S. M. Kirova (Leningrad Textile and Light Industry Institute)

SUBMITTED: 07Jan65 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4041

Card 2/2

L 11980-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6000686 SOURCE CODE: UR/0080/65/038/009/2091/2096

AUTHOR: Kirilenko, Yu. K.; Meos, A. I.; Vol'f, L. A.

ORG: Leningrad Institute for the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Dehydration of polyvinyl alcohol fibers and modification in the diene sections of the chain

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 9. 1965, 2091-2096

TOPIC TAGS: polyvinyl alcohol, synthetic fiber, dehydration, block copolymer, diene synthesis, ion exchange resin

ABSTRACT: The possibility of dehydrating polyvinyl alcohol (PVA) fibers to increase their moisture resistance without destroying their physical-mechanical properties was investigated, and also the possibility of modifying the dehydrated PVA fibers by graft polymerization. Dehydration of oriented PVA was attempted by heating in nitrogen to 220°C, in dilute adipic, maleic or boric acid to 180°, and in air to 220°. Dehydration was not effected in the first two media. Heat treatment in air for 5 min reduced the OH-group content by 5-7 mol%, and after 40 min by 30-40 mol%. This increased the moisture resistance but greatly reduced fiber strength. Treatment of PVA fibers in inert media (n-alkane, toluene,

Card 1/2 UDC: 542.936+547.361.2+54--126

L 11980-66

ACC NR: AP6000686

xylene, CCl_4) under vacuum in nitrogen in the presence of a dehydrating agent (sodium or potassium bisulfate, benzene sulfonic acid, monosubstituted phosphates) at 75-200° up to several hours was more successful. Such treatment under mild conditions with potassium bisulfate imparted moisture resistance to the fibers with a minimum loss of physical-mechanical properties. Graft polymerization onto the conjugated double bonds formed by dehydration of the PVA fibers was effected with acrylonitrile, acrylic acid, vinyl acetate and vinyl pyridine. The dehydrated PVA fibers undergo a typical diene synthesis reaction with maleic anhydride to form a product which upon hydrolysis is a cationic exchange material with static exchange capacity up to 6 mg equiv /gm. Orig. art. has: 2 tables and 4 equations.

SUB CODE: 07, 11/ SUBM DATE: 27Jan65/ ORIG REF: 010/ OTH REF: 002

Card 2/2

BURTNSKIY, I.V.; VOL'F, L.A.; MEOS, A.I.

[illegible]ation potential of electron-exchanging fibers. Zhur.prikl.khim. [illegible]:2604 N '65. (MIRA 19:1)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni S.M.Kirova. Submitted July 6, 1965.

L 42034-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6011223 (A) SOURCE CODE: UR/0413/66/000/006/0060/0060

INVENTOR: Meos, A. I.; Vol' f, L. A.; Kirilenko, Yu. K.; Girdyuk, V. V.

ORG: none

TITLE: Method of chemical processing of polyvinyl alcohol. Class 29, No. 179877

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 60

TOPIC TAGS: polyvinyl alcohol, monomer, acrylonitrile, chemical treatment

ABSTRACT: An Author Certificate has been issued for a method of chemical processing of polyvinyl alcohol. To impart new properties such as a light resistance, dehydrated polyvinyl alcohol and its byproducts are treated with dienophilic monomers such as an acrylonitrile. [Translation] [NT]

SUB CODE: 07/ SUBM DATE: 12Oct64/

Card 1/1 af UDC: 677.494.744.72:677.864.512.15:547.339.211

L 21168-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM
ACC NR: AP6009562 SOURCE CODE: UR/0413/66/000/005/0154/0154

INVENTOR: Meos, A. I.; Vol'f, L. A.; Kirilenko, Yu. K.

ORG: none

TITLE: Method for the chemical treatment of poly(vinyl alcohol). Class 29, No. 173876

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 154

TOPIC TAGS: organic semiconductor, semiconducting polymer, polyvinyl alcohol, heat resistant polymer, water resistant polymer

ABSTRACT: An Author Certificate has been issued for a chemical treatment method for poly(vinyl alcohol) and end-products from it, involving dehydration on heating in an inert medium. To impart water- and heat-resistance and semiconducting and other special properties to the poly(vinyl alcohol) end-products, dehydration is carried out in a boiling solvent with acid salts of alkali metals or benzenesulfonic acid. [SM]

SUB CODE: 11, 20/ SUBM DATE: 23Jun64/ ATD PRESS: 4222

Card 1/1

L 17720-66 EWP(j)/EWT(m)/ETC(f)/EWG(m)/T RM/DS

ACC NR: AP6003414 (A) SOURCE CODE: UR/0190/66/008/001/0065/0068

AUTHORS: Burinskiy, S. A.; Vol'f, L. A.; Mees, A. I. 44

ORG: Leningrad Institute of Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti) 15.44.55

TITLE: Electron exchangers based on hydroxyl-containing fibers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 1, 1966, 65-68

TOPIC TAGS: polymer, copolymer, graft copolymer, polycondensation, phenolic plastic, phenolformaldehyde, synthetic fiber

ABSTRACT: A method for the production of electron-exchange fibers by the graft copolycondensation of polyhydroxyl phenols and formaldehyde with hydroxyl-containing fibers was developed. The experimental procedure followed here was similar to that described by R. Tsereza (Blok-i privityye sopolymery, Izd. Mir, M., 1964). The experimental results are tabulated. It was found that the redox capacity of the fibers was 1.5 to 4 mg - equiv/g. From structure studies of the graft polymers, it is concluded that the polymer chains are partially cross-linked. The redox fibers were found to possess a considerable resistance to acid and alkalies. Orig. art. has: 1 table.

SUB CODE: 07,11/ SUBM DATE: 12Feb65/ ORIG REF: 003/ OTH REF: 001

Card 1/1 mat UDC: 678.01:53

L 41639-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6008273 (A) SOURCE CODE: UR/0080/66/039/002/0388/0393

AUTHOR: Kiselev, G. A.; Vol'f, L. A.; Meos, A. I.

ORG: Leningrad Institute of Textile and Light Industry imeni S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Inflammable polyvinyl alcohol fiber based on the reaction of PVA with dimethylol urea and tetramethylol phosphorous chloride

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 2, 1966, 388-393

TOPIC TAGS: synthetic fiber, polyvinyl alcohol, fire resistant material, CHEMICAL BONDING, ESTERIFICATION

ABSTRACT: An inflammable polyvinyl alcohol fiber is produced by an initial crosslinking with $HO-CH_2-NH-C-NH-CH_2-OH$ (I) and subsequent reaction with $(HOCH_2)_4PCl$ (II). (I) is prepared by a condensation reaction of urea:formaldehyde in a molar ratio of 1:2.5 in neutral or slightly alkaline solution at 60-70°C. In the esterification reaction between PVA fiber and (I), the fiber is placed in a solution of (I) and kept at 70°C for 30 min. The fiber is then centrifuged (5000 rpm) for 5 min and subsequently heated at 155-160°C for 8-10 min. The extent of centrifugation affects the degree of esterification of the fiber. It was found that the greater the extent of centrifugation, the smaller the degree of esterification. The resulting ester bonds are stable at pH from 6-12 but are unstable in acid solution, breaking down at pH equal to 3. In the

UDC: 547.361.2-126

Card 1/2

L 41539-66

ACC NR: AP6008273

second reaction, the esterified fiber is saturated with an aqueous solution of 10 wt % of (II) and triethanolamine (to sustain a neutral solution) at 70°C for 30 min. The fiber is then washed and dried in air (130°C) for 30 min. Analyses are made for nitrogen, hydroxyl group, and phosphorous content of the fiber. The crosslinked fiber is found to be stable in boiling water and other reagents. Containing at least 2 wt % phosphorous, it is found to be inflammable. On the basis of the analytical data, 80% of the resulting fiber is thought to be doubly bonded to two nitrogen atoms as in the first formula above, while 20% appears to be triply bonded as in the second formula. Orig. art. has: 3 figures, 1 table.

SUB CODE: 11/ SUBM DATE: 01Dec64/ ORIG REF: 007/ OTH REF: 003

Card 2/2 af

L 39[illegible]-66

ACC NR: AP6011017 (A) SOURCE CODE: UR/0080/66/039/003/0664/0668

AUTHOR: Polyanskaya, V. I.; Meos, A. I.; Vol'f, L. A.

ORG: Leningrad Institute of the Textile and Light Industry imeni S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Study of esterification of polyvinyl alcohol fibers with titanium tetrachloride

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 3, 1966, 664-668

TOPIC TAGS: polyvinyl alcohol, titanium compound, synthetic fiber, esterification

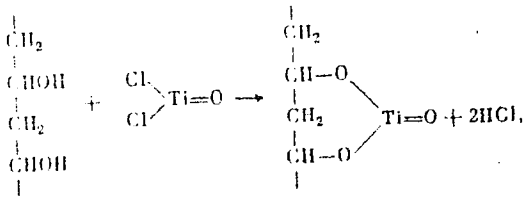
ABSTRACT: The article describes the waterproofing polyvinyl alcohol (PVA) fiber with titanium tetrachloride and examines the properties of titanium-containing fibers. Esterification of PVA fibers with $TiCl_4$ is represented as follows:

$$TiCl_4 + H_2O \rightleftarrows TiOCl_2 + 2HCl.$$

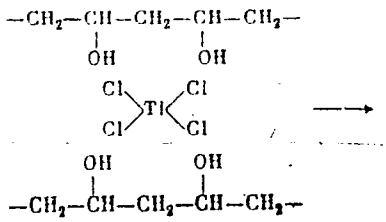
UDC: 66.095.13 + 547.361.2-126

Card 1/3

ACC NR: AP6011017

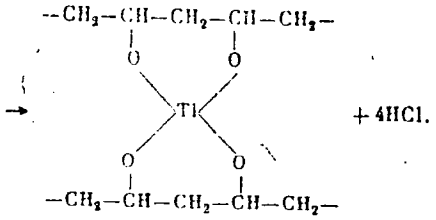


This may be associated with cross-linking between chains:



Card 2/3

L 39017-66
ACC NR: AP6011017



PVA fibers were treated with $TiCl_4$ in an aqueous bath containing sulfuric acid as catalyst. The titanium content of the fiber was found to increase with the $TiCl_4$ content in the bath. A 2.5-3 wt % content (4.7-5.7 mole % content) of Ti in the fiber ensures the required water repellency and is optimal. The optimum acid concentration is 7-12%. Orig art. has: 2 figures.

SUB CODE: 11,07/ SUBM DATE: 12Dec64/ ORIG REF: 004/ OTH REF: 007

Card 3/3 MLP

L 44213-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6015649 (A) SOURCE CODE: UR/0413/66/000/009/0059/0059

INVENTOR: Kirilenko, Yu. K.; Vol' f, L. A.; Meos, A. I.

ORG: none

TITLE: Method for chemical treatment of polyvinyl alcohol. Class 29, No. 181236

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 59

TOPIC TAGS: polyvinyl alcohol, tertiary amine, halogenation, chemical treatment

ABSTRACT: An Author Certificate has been issued for a method of chemical treatment of polyvinyl alcohol and its byproducts. To add nonflammability, anion-exchange capabilities, and antimicrobe properties, dehydrated polyvinyl alcohol or its byproducts are subjected to halogenation, followed by treatment with a tertiary amine such as a triethylamine. [Translation] [NT]

SUB CODE: 07/ SUBM DATE: 12Apr65/

Card 1/1 JS UDC: 678.744.72:66.093.6.094.403

ACC NR: AP7000021 (A,N) SOURCE CODE: UR/0080/66/039/011/2608/2609

AUTHOR: Vol'f, L. A.; Khokhlova, V. A.; Kotetskiy, V. V.; Meos, A. I.; Konev, Yu. Ye.

ORG: Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy institut tekstil'noy i legkoy promyshlennosti)

TITLE: Preparation of antimicrobial polymeric materials by ion exchange with antiseptics

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 11, 1966, 2608-2609

TOPIC TAGS: antimicrobial plastic, antiseptic, polyvinyl alcohol

ABSTRACT: A method of imparting antimicrobial properties to polymeric materials, involving the introduction of antiseptics into these materials by means of ion exchange, has been developed. The polymeric materials used were poly(vinyl alcohol) and viscose fibers, but the method is said to be equally applicable for imparting antimicrobial properties to plastic films, plastic articles, and raw and vulcanized rubbers. Poly(vinyl alcohol) was first modified by previously describe methods so as to attach sulfonic or carboxyl groups to it, but the vi viscose, which contains some carboxyl groups, was used as is. The fibers were treated with the antiseptics silver, streptomycin,

Card 1/2 UDC: 677.862.531

ACC NR: AP7000021

colimycin, quinosol, brilliant green, trypaflavine, rivanol, albucid, or streptocid. The antiseptics were applied as 0.1 M aqueous solution except for the high-molecular-weight antiseptics (streptomycin, brillan green) which were used in 1×10^{-3}—2×10^{-3} M aqueous solutions. The microbiological activity of the samples was tested against bacteria (Staphilococus aureus) and molds (Candida albicans and Trichophyton gupseum) at 37C for 20—24 hr. Test results are given in tabular form in the source. Quinosol-treated fibers were active against all three microorganisims. Most of the fibers withstood 10 or more washings with OP-10 detergent without losing their microbiological activity. —

SUB CODE: 07, 06/ SUBM DATE: 19Apr66/ ORIG REF: 006/ ATD PRESS: 51

Card 2/2

ACC NR: AP6025618 (N) SOURCE CODE: UR/0413/66/000/013/0075/0075

INVENTORS: Vol'f, L. A.; Meos, A. I.; Inkina, S. A.

ORG: none

TITLE: A method for obtaining ion-exchanging fibers and fabrics. Class 39, No. 183375

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 75

TOPIC TAGS: ion exchange, fiber, fabric, polyvinyl, alcohol, aldehyde

ABSTRACT: This Author Certificate presents a method for obtaining ion-exchanging fibers and fabrics by acetalyzing with aldehydes the fibers and fabrics based on polyvinyl alcohol. To obtain ion-exchanging materials, aldehydes containing amino groups or pyrridone cycles are used as aldehydes. The acetylyzed haloid product is then alkylated and treated with a base.

SUB CODE: 11/ 07/ SUBM DATE: 14Dec61

Card 1/1 UDC: 661.183.12:677.494.744.72:677.862.22

MEOS, E. I.

First air raids for peaceful purposes. IUn.tekh. 7 no.2:45-48 F '63. (MIRA 16:4)

(Aeronautics, Commercial)

MEOS, Edgar Ivanovich

Parachute invented by G.E.Kotel'nikov. IUn.tekh. 7 no.5:49 My '63. (MIRA 16:6)
(Parachutes) (Kotel'nikov, Gleb Evgen'evich, 1872-1944)

S/0057/64/034/007/1206/1209

ACCESSION NR: AP4041995

AUTHOR: Sushkov, A.D.; Meos, V.A.

TITLE: Generator of nanosecond pulses with a superhigh repetition rate

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.7, 1964, 1206-1209

TOPIC TAGS: pulse generator, klystron, nanosecond pulse generation

ABSTRACT: The authors describe in rather general terms a pulse generator of the klystron type capable of delivering 10-v pulses with a 0.4-nanosec rise time at a repetition rate of 3×10^8 sec^{-1}, and weaker pulses at repetition rates of up to 6×10^8 sec^{-1}. The pulse generator operates with a 350-v 50 mamp electron beam and 5 watts of RF excitation. The good performance of this instrument is due to the use of a high bunching voltage, of the order of the beam acceleration voltage; this permits a short drift tube to be employed and thus avoids a number of debunching effects encountered with longer drifts. The instrument is constructed in two parts. One part is of glass-Kovar construction and contains the following components in order: the electron gun; a Kovar collar; the drift tube, flanged for external connection; and the collector, which projects beyond the glass envelope. The other part is of metal

Card 1/2

ACCESSION NR: AP4041995

and consists of a tunable resonant cavity to develop the bunching voltage at the pulse repetition frequency and a broad band coupling device to transfer the pulses, generated at the output gap between the drift tube and the collector, to a coaxial cable. The glass generator tube presumably fits inside the resonance cavity, although the authors do not state this explicitly. Output oscillograms are reproduced in a figure. The pulse generator described in this paper has the following advantages over the somewhat similar device described by W.H.Cornetet and I.G.Josenhans (IRE Trans. on Electron Device,ED-8,No.6,1961); it is of simpler construction, has a higher pulse repetition rate, requires less RF excitation, employs a higher perveance electron beam, uses a lower accelerating potential, does not employ magnetic focusing, and does not require air-blast cooling. The pulse amplitude, however, is only half that of the Cornetet-Josenhans instrument. Orig.art.has: 3 figures.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im.V.I.Ul'yanova-Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 15Jul63 ATD PRESS: 3082 ENCL: 00

SUB CODE: EC NR REF SOV: 002 OTHER: 003

L 00005-66 EWT(1)/EWA(h)
ACCESSION NR: AR5005449 S/0275/64/000/012/A021/A021 25
621.385.623.4 B

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 12A110

AUTHOR: Meos, V. A.

TITLE: Analysis of the output signal of a klystron-type pulse generator 25

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vyp. 53, 1964, 236-257

TOPIC TAGS: klystron generator, pulse generator, klystron pulse generator

TRANSLATION: An engineering calculation of the harmonic content and electron-packet shape, in the output gap of a pulse generator, according to a kinematic theory of bunching is presented. An output device is considered in which a coaxial line is end-excited by the electron beam. An equivalent circuit of the output device, as well as a formula for the current as the sum of the harmonics with definite amplitudes and phases are presented. The output device of the klystron-type generator must ensure interaction with all harmonics of the electron packet. A formula for the output-gap admittance at the n-th harmonic is developed. The output impedance depends on the coaxial-line characteristic impedance, accelerating voltage, gap width, total capacitance, and the number of harmonic.

Card 1/2

L 00005-66

ACCESSION NR: AR5005449

Formulas for the n-th harmonic amplitude have been used for calculating spectral characteristics for several modes of operation at the 17th harmonic. The voltage amplitude rapidly falls off for the higher number of harmonic which is due to the decreasing current and output impedance. The output impedance can be increased by inserting an inductance into the coaxial-line circuit. This inductance, represented by a length of shorted coaxial line, necessitates cutting down the capacitance of the output resonator. This entails a smaller diameter of the internal coaxial conductor and a thinner beam. Formulas for the a-c component of the output voltage with and without the inductance are compared. A certain value of the inductance yields a higher output-pulse amplitude without essentially impairing pulse parameters. The above method permits (1) determining, by a kinematic calculation, the spectral composition and output-signal shape of klystron-type pulse generators with sufficient engineering accuracy and (2) determining the optimal parameters of the output device, when the buncher design is specified and a coaxial line is end-excited by the electron beam.

Bibliography: 7 titles.

ENCL: 00

SUB CODE: EC

Card 2/2 mlr

and the

L 36669-65 EWT(1)/EWA(h) Peb

ACCESSION NR: AP5008160 S/0286/65/000/005/0038/0038

AUTHOR: Sushkov, A. D.; Meos, V. A. 16 B

TITLE: Nanosecond pulse oscillator. Class 21, No. 168755

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 38

TOPIC TAGS: pulse oscillator, klystron, nanosecond pulse

ABSTRACT: This Author Certificate introduces a nanosecond pulse oscillator consisting of a klystron with a control grid and a separate excitation circuit (see Fig. 1 of Enclosure). To reduce pulse duration, a section of a waveguide mounted perpendicularly to the electron flow and connected to the control grid by a feedback line serves as the output system. Orig. art. has: 1 figure. [JR]

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute)

SUBMITTED: 21Oct63 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3224

Card 1/2

L 49244-65 EWT(1)/EPA(w)-2/EEC(t)/EWA(m)-2/EWA(h) Pz-6/Peb/Pi-4 IJP(c) AT

ACCESSION NR: AP5010811 UR/0057/65/035/004/0723/0738

42
41
B

AUTHOR: Sushkov, A.D.; Meos, V.A.

TITLE: The klystron method for producing nanosecond and subnanosecond videopulses. 1

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 723-738

21

TOPIC TAGS: klystron, bunch formation, electron beam, pulse generator 25

ABSTRACT: The authors are interested in developing the klystron method for producing short pulses at high repetition rates, suggested many years ago by J.B. Halstead (Proc. Phys. Soc., 60, 397, 1948) and others. In the present paper they report the results of theoretical investigations. The bunching of electrons in a one-dimensional beam by a uniform modulating field is discussed in detail with particular reference to the effects of large modulating fields. The effect of the nonuniform modulating field in the unscreened gap between two circular waveguides on the bunching of the two-dimensional (axially symmetric) beam is considered. Excitation by the bunched beam of both coaxial and strip lines is treated and the effect of the load impedance on the pulse shape is discussed. It is concluded

Card 1/2

L 49244-65

ACCESSION NR: AP5010811

that it should be possible to obtain pulses of duration of the order of 10^{-10} sec at repetition rates of hundreds of Mc/sec. Orig. art. has: 45 formulas, 8 figures, and 1 table.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V.I.Ul'yanova (Lenina) (Leningrad Electrotechnical Institute)

SUBMITTED: 05May64 ENCL: 00 SUB CODE: EC

NR REF SOV: 003 OTHER: 004

Card 2/2

L 47382-65 EWT(1)/EWA(h) Pab

ACCESSION NR: AP5010812 UR/0057/65/035/004/0739/0747

15
14
B

AUTHOR: Sushkov, A. D.; Meos, V. A.

TITLE: Klystron method of generating nano- and subnanosecond video pulses. II.

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 739-747

TOPIC TAGS: klystron generator, video pulse generator, nanosecond video pulse, subnanosecond video pulse, single stage klystron generator

ABSTRACT: Six different models of a single-stage low-voltage klystron generator of ultrashort video pulses have been experimentally investigated. The generators of the GSKI series consist of a klystron with two hf gaps and an external armature (see Fig. 1 of Enclosure). The metal-glass klystron contains electron gun 1, accelerating electrode 2, drift space 3, and collector 4. The input (gridless) gap is formed between the plate and the drift space, and the output (grid) gap, between the drift space and the collector. Wideband resonator 5 is connected to the input gap, and coaxial line 6 with a standard waveguide resistance and plug 7 are connected to the output gap. Tests were made of both video-pulse and generator parameters, the latter including modulating voltage amplitude at the input, electron

Card 1/4

L 47182-65

ACCESSION NR: AP5010812

currents transmitted to the various electrodes, and the lumped capacitance at the output. The GSKI-4 model proved to be the most satisfactory generator; its parameters are given in Table 1. Orig. art. has: 5 figures and 1 table. [DW]

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute)

SUBMITTED: 09Jul64 ENCL: 02 SUB CODE: EC

NO REF SOV: 002 OTHER: 002 ATD PRESS: 3251

Card 2/4

L 47382-65

ACCESSION NR: AP5010812

ENCLOSURE: 01

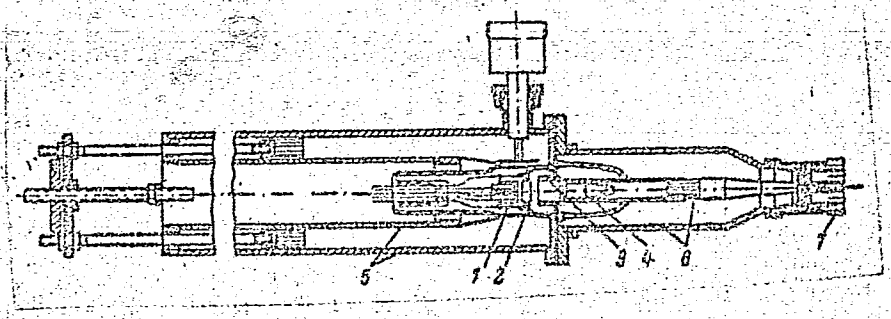


Fig. 1. Klystron generator of video pulses

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L 47382-65

ACCESSION NR: AP5010612 ENCLOSURE: 02

Table 1. Basic parameters of the GSKI-4 klystron generator

Accelerating voltage, v	350
Beam current in drift space, mamp	60
Collector current, mamp	35
Modulating-voltage amplitude, v	300
Excitation power, w	5
Pulse duration, nsec	0.35
Rise time, nsec	0.2
Pulse amplitude, v	10
Repetition frequency, Mc	200
Output characteristic impedance, ohm	75
Collector cooling	Natural

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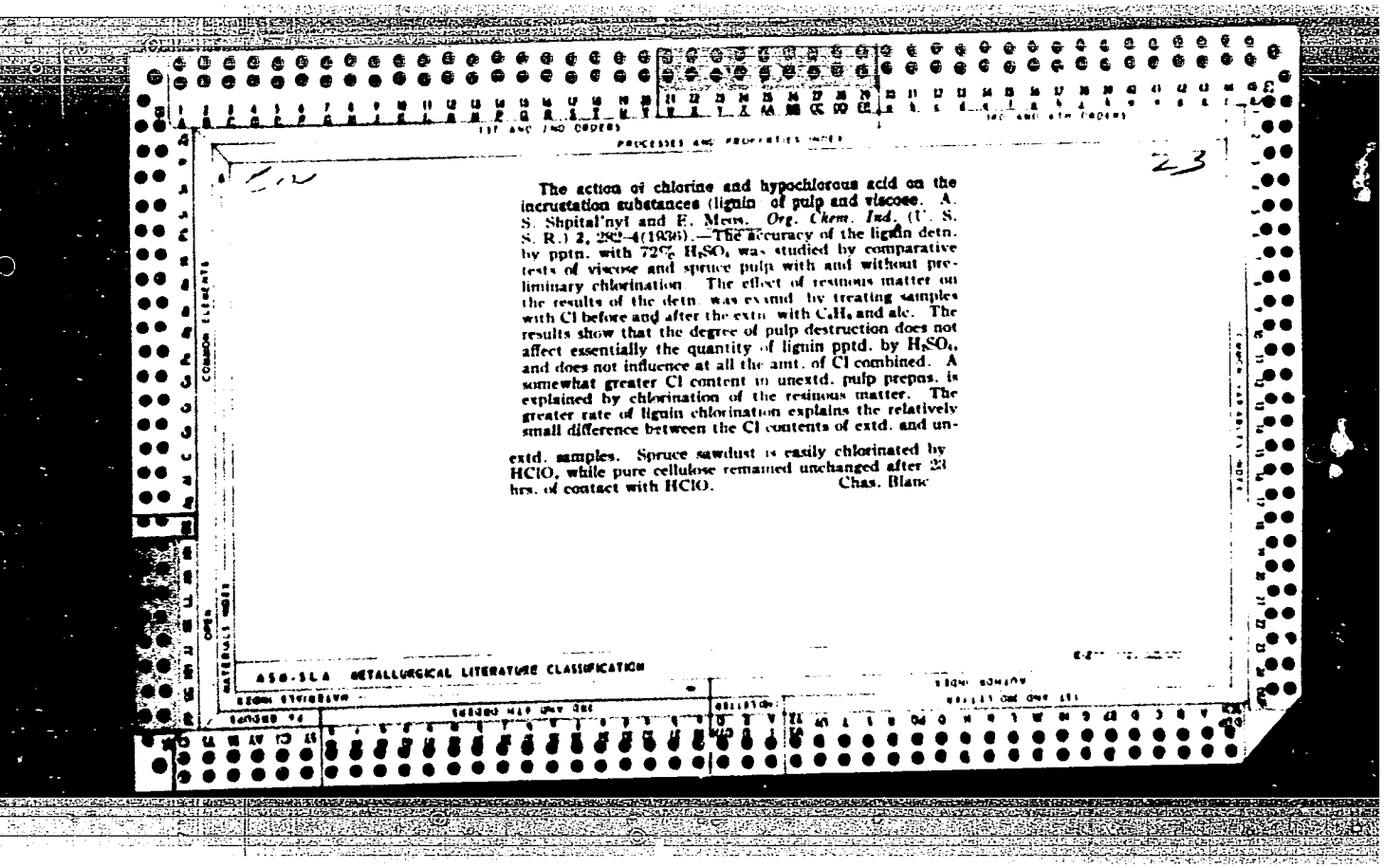
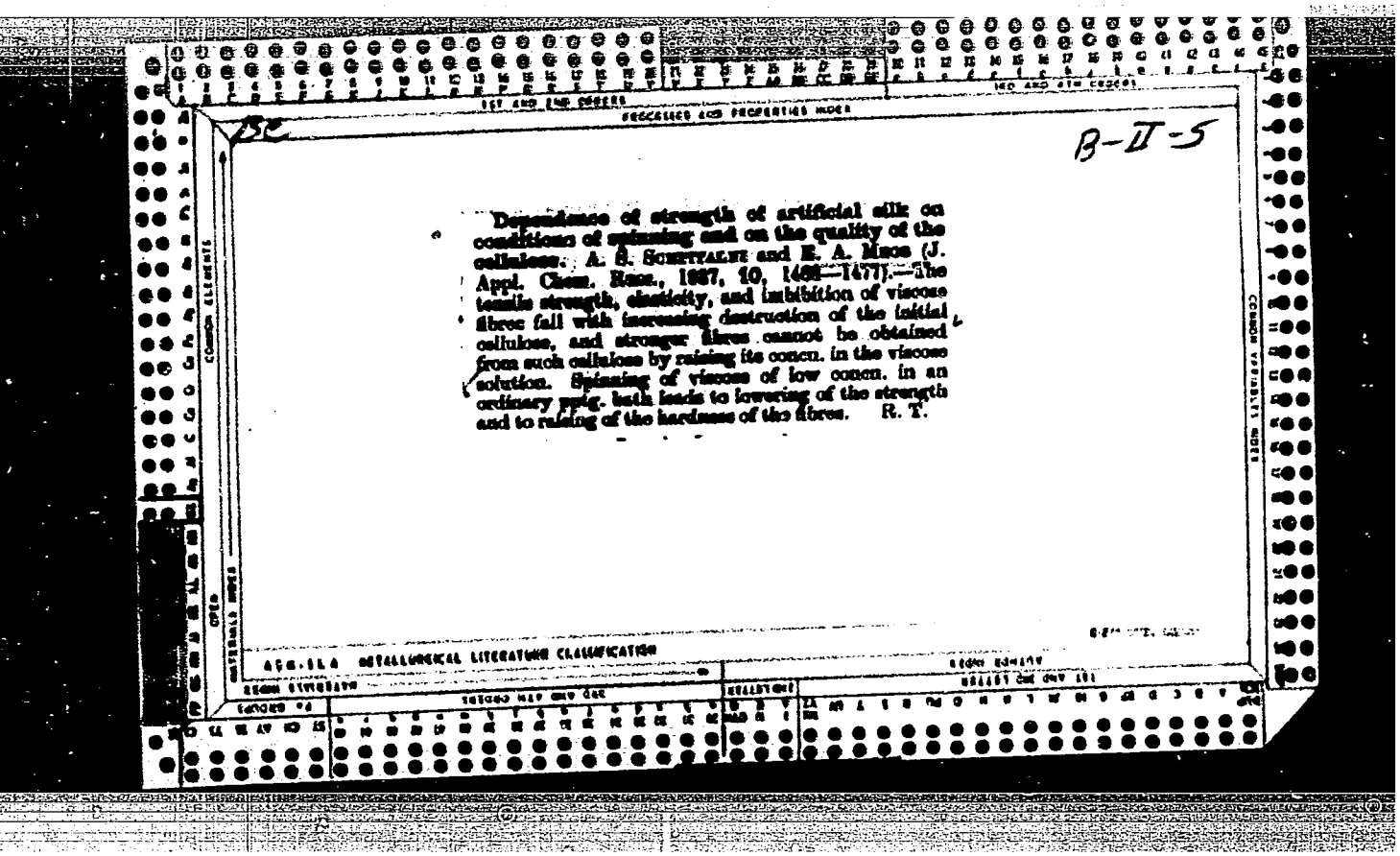
Card 4/4



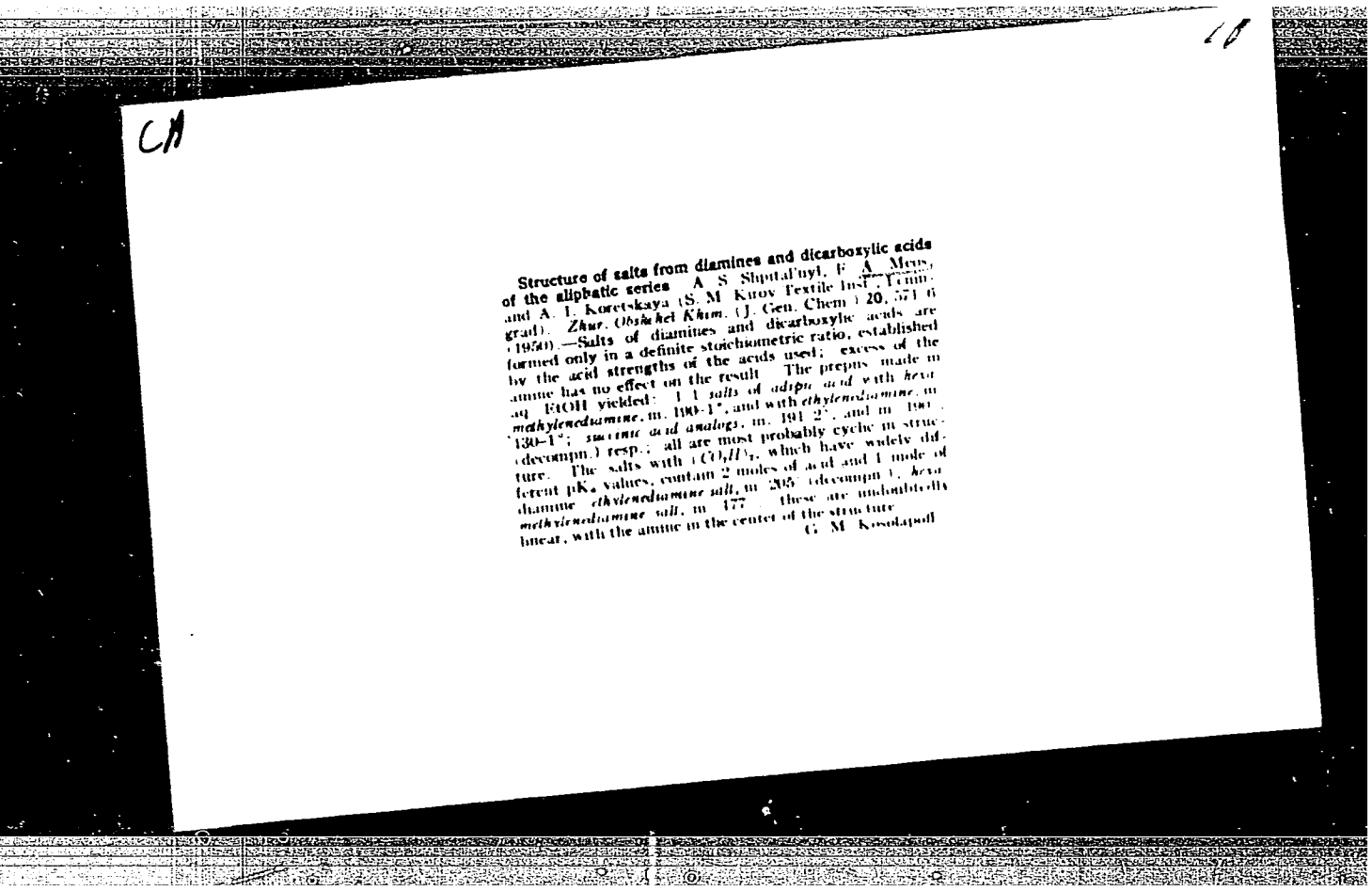
The action of chlorine and hypochlorous acid on the incrustation substances (lignin) of pulp and viscose. A. S. Shpital'nyi and E. Mess. *Org. Chem. Ind.* (U. S. S. R.) 2, 282–4(1936).—The accuracy of the lignin detn. by pptn. with 72% H_2SO_4 was studied by comparative tests of viscose and spruce pulp with and without preliminary chlorination. The effect of resinous matter on the results of the detn. was examd. by treating samples with Cl before and after the extn. with C_6H_6 and alc. The results show that the degree of pulp destruction does not affect essentially the quantity of lignin pptd. by H_2SO_4, and does not influence at all the amt. of Cl combined. A somewhat greater Cl content in unextd. pulp prepns. is explained by chlorination of the resinous matter. The greater rate of lignin chlorination explains the relatively small difference between the Cl contents of extd. and unextd. samples. Spruce sawdust is easily chlorinated by HClO, while pure cellulose remained unchanged after 24 hrs. of contact with HClO. Chas. Blanc

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION



B-II-5

Dependence of strength of artificial silk on conditions of spinning and on the quality of the cellulose. A. S. Schwalbe and E. A. Mace (J. Appl. Chem. Russ., 1937, 10, 1468—1477).—The tensile strength, elasticity, and imbibition of viscose fibres fall with increasing destruction of the initial cellulose, and stronger fibres cannot be obtained from such cellulose by raising its concn. in the viscose solution. Spinning of viscose of low concn. in an ordinary spntg. bath leads to lowering of the strength and to raising of the hardness of the fibres. R. T.



Structure of salts from diamines and dicarboxylic acids of the aliphatic series. A. S. Shpital'nyi, F. A. Mezn[illegible] and A. I. Koretskaya (S. M. Kirov Textile Inst., Leningrad). *Zhur. Obshchei Khim.* (J. Gen. Chem.) **20**, 571-6 (1950).—Salts of diamines and dicarboxylic acids are formed only in a definite stoichiometric ratio, established by the acid strengths of the acids used; excess of the amine has no effect on the result. The preps. made in aq. EtOH yielded: 1:1 *salts* of *adipic acid* with *hexamethylenediamine*, m. 190–1°, and with *ethylenediamine*, m. 130–1°; *succinic acid analogs*, m. 191.2°, and m. [illegible] (decompn.) resp.; all are most probably cyclic in structure. The salts with $(CO_2H)_2$, which have widely different pK_a values, contain 2 moles of acid and 1 mole of diamine: *ethylenediamine salt*, m. 205° (decompn.), *hexamethylenediamine salt*, m. 177°; these are undoubtedly linear, with the amine in the center of the structure.

G. M. Kosolapoff

USSR/Chemistry - Synthetic Fibers Jul 52

"The Problem of the Formation of Polyamide Resins," A. S. Shpital'nyy, Ye. A. Meos, A. Serkov, Lab of Synthetic Fibers, Leningrad Textile Inst imeni S. M. Kirov

"Zhur Obshch Khim" Vol 22, No 7, pp 1266-1270

In the formation of polyamide structures, 7-membered rings may be converted to polymers in 2 ways: polymerization and polycondensation. States that, contrary to published data, conditions could be found under which N-methylcaprolactam forms polymers. The resulting polymers

229T48

were found to be more sensitive to heat than the polymers of 7-membered rings not substituted at the N-atom. Products of the combination of ε-aminocaprolactam with adipic and succinic acids were isolated. The addn of ε-aminocaproic acid to ε-caprolactam significantly increases the relative viscosity of the polymer in the early stage of the reaction.

229T48

MEOS, M. A.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Synthetic Resins and Plastics

The formation of polyamide resins. A. S. Shpital'nyi, M. A. Meos, and A. Serkov (S. M. Kirov Textile Inst., Leningrad). *J. Gen. Chem. U.S.S.R.* 22, 1311-14(1952) (Engl. translation).—See *C.A.* 47, 341*f*. H. L. H...

10-11-54

USSR/Chemistry - Synthetic Fibers Aug 53

"Opening the Ring in ε-Caprolactam Using Dicarboxylic Acids of the Fatty Series and Amines," A. S. Shpitalniy, Ye. A. Meos and K. Ye. Perepelkin, Leningrad Tech Inst im S. M. Kirova, Chair of Synthetic Fibers

Zhur Obshch Khim, Vol 23, No 8, pp 1382-1383

Treated ε-caprolactam (I) with aniline, hexamethylenediamine, and ethylenediamine and obtained the reaction products and the benzoyl derivs of the reaction products. Some of the products were also isolated in the form of picrates and oxalates. Presents some ideas on the character of the polymerization-condensation processes taking place when (I) is converted to a polymer.

270T28

270T28

MEOS, E. A.

USSR/Chemistry - Macromolecular chemistry

Card 1/1 : Pub. 151 - 9/37

Authors : Shpital'nyy, A. S.; Perepelkin, K. E.; and Meos, E. A.

Title : Process of formation of polyamide resins. Part 4.- The multistage process of formation of polyamide resins and the products obtained from the reaction of ε - caprolactam with adipic acid

Periodical : Zhur. ob. khim. 24/3, 447-450, Mar 1954

Abstract : The multistage polymerization process occurring during the formation of polyamides from ε -caprolactam was definitely proven by the formation of adipic acid (ε -caprolactam reaction products with a molar ratio of 1 : 2 and 1 : 4). The properties of reaction products of different molecular ratio and the solubility of Ag-salt, a reaction product during equimolecular ratio of the basic components, were determined. The presence of benzoic acid in the reaction mixture during its reaction with ε - caprolactam is explained. Ten references: 7-USSR; 2-German and 1-USA (1843-1953). Table.

Institution: The Textile Institute, Leningrad

Submitted : July 3, 1953

MEPARISHVILI, B.Sh.

Strangulation of the appendix in a hernial sac in right cryptorchism. Khirurgiia 35 no.3:102 Mr '59. (MIRA 12:8)

1. Iz Kasharskoy rayonnoy bol'nitsy (glavnyy vrach S.M.Tovstik) Kamenskoy oblasti.
(TESTICLE--ABNORMITIES AND DEFORMITIES)
(HERNIA)

MEPARISHVILI, M.

BARYSHNIKOV, V.; MEPARISHVILI, M.; LOPUKHINA, A.

Practice of the foremost savings banks. Fin.SSSR 15 no.10:64-67 O'54. (MLRA 8:2)

1. Zaveduyushchiy Bryukhovetskoy tsentral'noy sberegatel'noy kassoy Krasnodarskogo kraya (for Baryshnikov). 2. Zaveduyushchiy tsentral'noy sberegatel'noy kassoy Leninskogo rayona g.Tbilisi (for Meparishvili). 3. Zaveduyushchaya Pistsovskoy sberegatel'noy kassoy Komsomol'skogo rayona Ivanovskoy oblasti (for Lopukhina).
(Savings Banks)

MEPISASHVILI, I. S.

"The Epithelial Histogenesis of the Cloaca, Allantois and Their Derivatives in Cattle (Bos Taurus)." Cand Biol Sci, Tbilisi State U, Tbilisi, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13) SO: Sum 508, 29 Jul 55