

MOZGLYAKOVA, V.A. (Moskva)

Method for studying disease incidence and temporary loss of work capacity in industrial plants. Sov. zdrav. 20 no.12:60-63 '61. (MIRA 15:6)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny imeni N.A. Semashko.
(OCCUPATIONAL DISEASES—STATISTICS)
(DISABILITY EVALUATION)

MOZGLYAKOVA, V.A., kand.med.nauk

Classification of diseases. Zdrav.Ros.Feder. 6 no.7:25-27 J1 '62.
(MIRA 15:9)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny
imeni N.A.Semashko.

(NOSOLOGY)

GUBINA, A.A.; ZAKGEYM, Ye.N.; ZUSMANOVICH, V.M.; IVANOV, K.N.;
LISITSYN, S.N.; MOZGOV, A.Ya.; PAVLOV, A.S.; PISKORSKIY,
B.N.[deceased]; USHOMIRSKAYA, A.I.; FINKEL'SHTEYN, S.M.;
CHRISTOVSKIY, V.B.; SHER, S.Yu.; ADAMOV, O.V., nauchn. red.;
BEYZERMAN, A.N., nauchn. red.; ZHIVOV, M.S., nauchn. red.;
POGORELYY, P.P., nauchn. red.; STAROVEROV, I.G., nauchn. red.;
STESHENKO, A.L., nauchn. red.; TSEYTLIN, M.M., nauchn. red.;
KOKHANENKO, N.A., inzh., red.; VOLNYANSKIY, A.K., glav. red.

[Assembling interior sanitary equipment] Montazh vnutren-
nikh sanitarno-tekhnicheskikh ustroystv. Moskva, Stroiizdat,
1964. 725 p. (MIRA 17:8)

MOZGOV, F.F.

Mechanical anode saw for cutting bundles of stressed wire.
Suggested by F.F.Mozgov. Rats.i izobr.v stroi. no.9:17-19
'59. (MIRA 13:1)

1. Po materialam tresta No.5 Ministerstva stroitel'stva BSSR.
(Wire) (Cutting tools)

HOSSAY, I. Ye. (Prof.)

"A Comparative Analysis of the ...
Species," Journal of ...

... ..

MOZGOV, I. Ye., Professor

Veterinary Prescription. Sel'khozgiz, Moscow, 1945.

Authorized by the Main Administration of Universities, Commissariat for Agriculture, USSR, as a textbook for veterinary colleges and faculties. (Reviewed by P. I. Popov, Head of the Department of Pharmacology, Kazan State Veterinary Institute).

Veterinariya, 23, 5-6, May-June 1946.

MOZGOV, J. Ye.

CA

11H

Action of gossypol on animals (dogs, rabbits, young swine). I. E. Mozgov. Veterinariya 23, No. 2:3 38-42 (1946). Dogs given solid gossypol with their feed in daily doses of 1-3 mg. per kg. of body wt. showed no clinical symptoms of poisoning, nor was any abnormality observed in dissecting the animal after 20 days; 5 mg. caused signs of poisoning, and in soln. (olive oil) a 3-mg. dose caused inflammation and degeneration throughout the system. The effect was more pronounced on young swine, and somewhat less so on rabbits. Increasing the dose to 150-200 mg. was reflected in localized reaction in 6-32 hrs. followed by ulceration and necrosis of the tissues, and disturbance of the heart functions. Gossypol is a poison of the cell, vessel and nerve, and the inflammatory process may last up to 50 days after the administration or cause death. B. Cutoff

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

1950M STIRBISHV

1950M 417 ONV ONE

1951171 ONV ONE

1950M 417 ONV ONE

1951171 ONV ONE

MOZGOV, I. Ye.

Results of the Study of Cotton Plant Foods. Veterinariya, 23, No 8-9,
August/September 1946.

Professor, Militaro-Veterinary Academy of the Red Army.

BOZGOV, I. Ya., Prof., Lt. Col., Vet. Corps; DANILINA, A. K.; and ANULOV, A. V., Mil. Vet. Acad

"Toxicity of Cotton Plant Fodder for Animals "

Under Sect. V - Tests and Practice Tab. Cont. p. 240 of

Boleznii Loshadey (Equine Diseases), Sverdlovsk, Otkiz-Sel'khozgiz, 1947

- compiled by A. Yu. Branzburg and A. Ya. Shapiro, under editorship of K. I. Laktionova, State Press for Agric. Lit.

The book is a collection of works on epizootiology, surgery, therapy and laboratory and clinical practice in the treatment of equine diseases. In the majority of cases, these works were previously published in the journal Veterinariya, or in one of the annuals issued by the Veterinary Administration of the Armed Forces USSR.

-4-9922, 1 May 1950, p 5

MOZGOV, I. YE., Prof.

PA 36T47

USSR/Medicine - Antibiotics
Medicine - Penicillin

Aug 1947

"Contemporary Data on Antibiotics," Prof I. Ye.
Mozgov, 4 pp

"Veterinariya" No 8

Antibiotics are new medical substances which have a high bactericidal and specific effect and very low toxicity. Among these are penicillin, gramicidin, streptomycin, and protocenomonin. Author gives a brief description of the chemical characteristics of each of the above-mentioned antibiotics, their normal doses and the effect that they have on specific diseases.

LC

36T47

MOZGOV, I.Ye.

A new pharmacopeia. Veterinariya, 24(3), 1947, p. 30.

MOZGOV, I. Ye.

Thirty Years of USSR Veterinary Pharmacology. Vet., v. 24, No 11, 1947,
p. 45~~0~~48.

MOZGOV, I.E.

Author of a textbook on Veterinary Pharmacology. Published by State United Publishing Houses - Agricultural Publishing House, 1948. 616 pgs. Edition - 25,000, Price 13 rubles, 95 kopeks. Review and bibliography by S.V. Bazhenov (Lecturer), M.P. Stanets (Assistant), and V.P. Glagolev (Assistant). (Veterinarnaia farmakologiya, Ogiz - Sel'khozgiz, 1948, 616str. Tirazh 25,000, tsena 13 r. 95 kops.)
SO: Veterinariia; Vol. 27; No. 2; 61-63; February 1950 Uncl de g
Trans. # 210 by L. Lulich

Some errors which have been permitted to occur in the textbook with respect to dosages have been published by the author in the journal "Veterinariia", No. 5, 1949.
SO: Veterinariia; Vol. 27; No. 2; 61-63; February 1950 Uncl de g
Trans. # 210 by L. Lulich

MOZGOV, I. YE., Prof

PA 21/47 9

USSR/Medicine - Sulfanilamide and Jul 48
Sulfanilamide Derivatives
Medicine - Drugs, Administration and Dosage

"Sulfanilamide Compounds," Prof I. Ye. Mozgov,
6½ pp

"Veterinariya" No 7

Describes administration and action of subject
compounds.

31/49T89

MOZGOV, I. YE.

Veterinarnaya retseptura (Veterinary Medical Prescriptions).
2nd edition. Moscow. Sel'khozgiz. 1950. 295 pages with illustrations.
Textbook for higher agricultural training schools.

U-5235

MOZGOV, I. E., Prof.

"The tasks of pharmacology in the light of the teaching of I. P. Pavlov."

SO: Veterinarija 27(12), 1950, p. 5-10

being translated Sept. '53 - No. 48, 23 Oct '53, p 111)

3000 SKD

MOZGOV, I. Ye. (Prof)

Critique and Bibliography: Professor I. Ye. MOZGOV. Pharmacology. Manual for Veterinarians. Moscow, Agricultural Publishing House. 1952. 519 pages with illustrations. Price 14 rubles, 5 kopeks, 25,000 copies.
Reviewed by Sidorova, S.G. (Professor, Doctor of Veterinary Sciences, Head, Department of Pharmacology, Stavropol Agricultural Institute, and Popov, P.I. (Professor, Honored Scientist of Kazakh SSR. Head, Department of Pharmacology, Kazan State Veterinary Institute (Tatar ASSR, REF SR)).
SO: Veterinariya; 30 (8) August 1953

MOZGOV, I.Ye., professor; SHEVCHENKO, L.O., redaktor; KOVAL'S'KYI, V.F.,
~~redaktor~~

[Veterinary prescription writing. Translated from the Russian]
Veterynarna retseptura. Pereklad z rossiis'koi. 2-e vydannia.
Kyiv, Derzh. vyd-vo sil'skohospodars'koi lit-ry URSR, 1953. 278 p.
[Microfilm] (MLRA 8:2)
(Veterinary medicine) (Prescription writing)

SENTYURIN, B.S., professor; PRAVDIN, N.S. professor; MOZGOV, Ye.I., professor;
ZAKUPINSKIY, D.I., professor; SANOTSKIY, V.A., professor; DOZORTSEVA,
P.M.; NABAYEVA, M.T.; MITSKIS, A.M.; SAMOYLOVA, Z.T.

Pharmacology and Toxicology Section of the Moscow Society of Physiologists,
Biochemists and Pharmacologists. Farm.i toks. 16 no.2:54-56 Mr-Apr '53.
(MLRA 6:6)

1. VNIINFI (for Dozortseva). 2. Moskovskaya veterinarnaya akademiya (for
Mozgov). 3. Sektsiya farmakologii i toksikologii Moskovskogo obshchestva
fiziologov, biokhimikov i farmakologov.
(Pharmacology--Societies) (Physiology--Societies) (Biochemis-
try--Societies)

USSR/Medicine, Veterinary - Tissue therapy Feb 53

"38th Plenary Session of the Veterinary Section of VASKhNIL," Prof Ye. S. Shulyumova, Prof I. Ye. Mozgov

"Veterinariya" Vol 30, No 2, pp 57-60

It was established that physical exercise stimulates the resistance of horses to infectious diseases; this principle is being applied by exercising horses that produce sera at biological factories. In this manner, more active sera are obtained. Slowly

244T22

granulating wounds and tumors are being treated with preserved equine blood and serum. Good results in veterinary practice have been obtained with ACS (antireticular cytotoxic serum). The Rostov NIVOS (Sci-Res Vet Exp Sta) supplies polyvalent ACS which is effective for several species of animals. APCS (antipancratic cytotoxic serum) has been successfully used for the fattening of animals. Further work has been done on ASD (Dorogov's antiseptic stimulant).

244T22

PA 244T22

MOROV, I. YE. ROP

MOZGOV, I.Ye.

[Pharmacology; handbook for veterinarians] Farmakologiya; rukovodstvo
dlia veterinarnykh vrachei. Izd.2. Moskva, Gos. izd-vo sel'khoz lit-
ry, 1954. 559 p. (MLRA 8:4)
(Pharmacology) (Veterinary materia medica and pharmacy)

MOZGOV, I.Ye., professor.

Principles of drug dosage. Veterinaria 32 no.5:37-42 Ky '55.
(DRUGS--ADMINISTRATION AND DOSAGE)(VETERINARY MATERIA MEDICA
AND PHARMACY)

MOZGOV, Ivan Yefimovich, professor; BRANZBURG, A.Yu., redaktor; SOKOLOVA,
N.N., tekhnicheskii redaktor

[Veterinary prescription writing] Veterinarnaia retseptura. Izd.
3-e, perer. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. (MLRA 9:11)
(Veterinary materia medica and pharmacy)

MOZGOV, I. Ye.

USSR / Farm Animals. General Problems. 2

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40381.

Author : ~~Mozgov, I. Ye~~
Inst : Not given.
Title : The Importance of Biogenous Stimulants in
Animal Husbandry.

Orig Pub: Vestn. s.-kh. nauki, 1956, No 3, 98-107.

Abstract: A survey. The author says that biogenous stimulants are active pharmacological preparations and are used for different purposes. Penicillin, citrated blood, antireticular cytotoxic serum, Dorogov's antiseptic-stimulant, tissue preparations, nicotinic acid, and thiamine considerably increase the resistance of animals and exert prophylactic action. By means of biogenous stimulants, it is possible to intensify the

Card 1/2

MOZGOV, I.Ye., akademik.

More attention to poultry breeding. Veterinariia 33 no.12:8-14
D '56. (MLRA 9:12)

(Poultry)

USSR / Farm Animals. General Problems. 2

Abs Jour: Ref Zhur-Biol., 1958, 40382.

Author : Mozgov I. Ye.
Inst : Not given.
Title : The Comparative Evaluation of the Stimulants of
the Growth of Animals.

Orig Pub: Vestn. s.-kh. nauki, 1957, No 5, 61-66.

Abstract: The effect of penicillin, biomyacin, and streptomycin upon young pigs, lambs and chicks was studied. Considerable variations in the growth of young animals, produced by the stimulants of growth, were found. The increase of weight is correlated with physiological growth conditioned by adequate feeding and management, and is brought about by the improvement of digestion and absorption of food, as well as by the in-

Card 1/2

USSR / Farm Animals. General Problems. 2

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40382.

Abstract: crease of the feed consumed. The stimulants do not disturb the life processes and produce no harmful effect on the condition of animals. At the same time, they increase the activity of the acid flora and promote the formation of enzymes and of vitamins A₁ and B₁ which strongly intensify the digestive process. On the other hand, with the use of stimulents, the incidence of diseases considerably decreased, and when these occurred, they had a lighter course.

Card 2/2

2

MOZGOV, I. YE.

"Pharmacological Action and Toxicity of Dimethyl-Butynyl-Amine, Dimethyl-(3-Chlorocrotyl)-Amine and Methyl-Di-(3-Chlorocrotyl)-Amine," by I. Ye. Mozgov and A. T. Babayan, Chair of Pharmacology, Moscow Veterinary Academy, and Chair of Organic Chemistry, Yerevan Zooveterinary Institute, Farmakologiya i Toksikologiya, Vol 20, No 1, Jan/Feb 57, pp 36-42

Experiments were conducted on white rats and rabbits to determine the toxicity, effect on the organs and systems of the organism, and the bactericidal and acaricidal actions of the following compounds:

		Molecular Weight	Melting Point
1. Dimethyl-butynyl-amine	$\begin{array}{c} \text{CH}_3 \\ \diagdown \\ \text{N}-\text{CH}_2-\text{C}\equiv\text{C}-\text{CH}_3 \\ \diagup \\ \text{CH}_3 \end{array}$	97.0	112-115° 0.5 mm
2. Dimethyl-(3-chlorocrotyl)-amine	$\begin{array}{c} \text{CH}_3 \\ \diagdown \\ \text{N}-\text{CH}_2-\text{CH}=\text{CCl}-\text{CH}_3 \\ \diagup \\ \text{CH}_3 \end{array}$	133.5	135-137° 0.5 mm
3. Methyl Di-(3-chlorocrotyl)-amine	$\begin{array}{c} \text{CH}_2-\text{CH}=\text{CCl}-\text{CH}_3 \\ \diagdown \\ \text{CH}_3-\text{N} \\ \diagup \\ \text{CH}_2-\text{CH}=\text{CCl}-\text{CH}_3 \end{array}$	208.0	122.5° 16.5 mm

54M.1345

MDZGDY, I. YE.

The experiments established: the three compounds have pronounced effect on the organisms of animals, microorganisms, and ticks: a clearly expressed depression of functional activities takes place; the effect is characterized by poor reactions of the animals to sound, light, and pain stimuli; weakened respiration and cardiac action; a drop in blood pressure; a decline in secretory and motor functions of the gastro-intestinal tract; inflammation of the skin with necrosis of its outer layer upon contact with the chemicals. Inhalation of their vapor causes inflammations of the mucous membrane and of the retropharyngeal and submaxillary glands. The chemicals are slowly excreted by the tissues, and prolonged exposure to their action causes permanent changes in the organism, striking the nervous system first of all. All are toxic with compound 3 the most toxic of the three chemicals, and compound 1 the least toxic; the bactericidal and acaricidal properties of the chemicals differ; compound 2 is highly active against coli bacilli; compound 1 is active against the bacilli of fowl tuberculosis and Ixodes ticks; compound 3 is active against streptococci and staphylococci. (U)

SUM.1345

17/2/57
MOZGOV, I.Ye.

Forty years of Soviet veterinary pharmacology. Farm. i toks. 20
no.5:32-41 S-O '57. (MIRA 10:12)

(PHARMACOLOGY,
vet., in Russia (Rus))
(MEDICINE, VETERINARY,
vet.pharmacol. in Russia (Rus))

MOZGOV, I.Ye., akademik.

Forty years of veterinary pharmacology in the U.S.S.R. Veterinariia
34 no.10:6-16 0 '57. (MLRA 10:11)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.
Lenina.

(Veterinary materia medica and pharmacy)

* *Mozgov, I. Ye*

BABAYAN, A.T.; MOZGOV, I.Ye.; GRIGORYAN, A.A., akademik; KASHKIN, M.G.

Synthesis and pharmacological tests of some amines and ammonium salts containing polyhalide radicals. Dokl. AN Arm. SSR 26 no.2: 81-93 '58. (MIRA 11:5)

1. Chlen-korrespondent AN Armyanskoy SSR (for Mozgov). 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I. Lenina (for Grigoryan). 3. Khimicheskiy institut Akademii nauk Armyanskoy SSR i Moskovskaya veterinarnaya akademiya.
(Amines) (Ammonium salts) (Halides)

MOZGOV, Ivan Yefimovich, akademik; KATSNEL'SON, S.M., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Substances promoting the growth of animals] Stimulatory rosta zhivotnykh. Moskva, Izd-vo "Znanie," 1960. 35 p. (Vsesoyuznoe obshchestvo po rasprostraneniю politicheskikh i nauchnykh znaniy. Ser.5, no.24). (MIRA 14:1)

1. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Mozgov).
(Growth promoting substances)
(Stock and stockbreeding)

MOZGOV, I.Ye.

Scientific and educational work of the Moscow Academy of Veterinary
Medicine. Veterinariia 37 no.11:19-23 N '60. (MIRA 16:2)

1. Rektor Moskovskoy veterinarnoy akademii.
(Moscow—Veterinary colleges)

MOZGOV, Ivan Yefimovich, prof., akademik; YARNYKH, A.M., red; DEYEVA,
V.M., tekhn. red.

[Pharmacology; manual for veterinarians] Farmakologiya; rukovod-
stvo dlia veterinarnykh vrachei. Izd. 3., perer. i dop. Mo-
skva, Gos. izd-vo sel'khoz. lit-ry, 1961. 583 p. (MIRA 14:6)

1. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh
nauk im. V.I.Lenina (for Mozgov)

(Veterinary materia medica and pharmacy)

MOZGOV, Ivan Yefimovich

"The use of pharmacological preparations to control functions of the digestive tract in ruminants."

report to be submitted at the 17th World Veterinary Congress,
Hanover, West Germany, 14-21 Aug 63.

SISAKYAN, N.M., akademik, glav. red.; ROSTOVTSEV, N.F., akademik, zam. glav. red.; BUKIN, V.N., zasl. deyatel' nauki i tekhniki RSFSR, doktor biol. nauk, zam glav. red.; MOZGOV, I.Ye., akademik, red.; KRASIL'NIKOV, N.A., red.; RAKITIN, Yu.V., red.; OVSYANNIKOV, A.I., red.; SHMANENKOV, N.A., doktor sel'khoz. nauk, red.; SAVEL'YEV, I.K., kand. sel'khoz. nauk, red.; KOCHEREZHKIN, V.G., kand. biol. nauk, red.; MIKHLIN, E.D., ved. red.; KOLPAKOVA, Ye.A., red. izd-va; RYLINA, Yu.V., tekhn. red.

[Problems of increasing the use of chemicals in animal husbandry; using biologically active preparations] Voprosy khimizatsii zhivotnovodstva; primeneniye biologicheski aktivnykh preparatov. Sbornik rabot. Moskva, Izd-vo AN SSSR, 1963. 303 p. (MIRA 17:1)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Rostovtsev, Mozgov). 3. Chlen-korrespondent AN SSSR (for Krasil'nikov, Rakitin). 4. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Ovsyannikov).

(Stock and stockbreeding—Feeding and feeds)

(Agricultural chemistry)

MOZGOV, I.Ye., akademik, red.; IONOVA, P.S., prof., red.;
OSTAPENKO, K.A., kand. veter. nauk, red.; OSIPOV, V.N.,
red.

[Prophylaxis and the apy of noninfectious diseases of farm
animals] Profilaktika i lechenie nezaraznykh boleznei sel'-
skokhoziaistvennykh zhivotnykh. Pod red. I.E.Mozgova, P.S.
Ionova, K.A.Ostapenko. Moskva, Izd-vo "Kolos," 1964. 254 p.
(MIRA 17:7)

1. Nauchno-metodicheskaya konferentsiya o merakh profilaktiki
nezaraznykh bolezney sel'skokhozyaystvennykh zhivotnykh.
2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni
V.I.Lenina (for Mozgov)

MOZGOV, Ivar Yefimovich, akademik; GOLIC, A. V. I., red.

[Pharmacological] stimulants in animal metabolism: farmakologicheskie stimulyatory v zhivotnovodstve. Moscow, Kolos, 1962. 366 p.

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V. I. Lenina (for Mozgov).

MOZGOV. I.Ye.

With our German friends. Veterinariia 42 no.9:100-107
S '65. (MIRA 18:11)

KOZGOV, V.

We use the system of advance payments. Stroitel' 2 no.11:19 N '56.
(MIRA 10:1)

1. Nachal'nik Khabarovskoy nauchno-issledovatel'skoy stantsii.
(Khabarovsk--Wages)

LIST AND TWO COLUMNS PROCESSES AND PROPERTIES INDEX

10

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Production of *p*-nitroaniline sulfate and the free base from N. A. A. Astipov and K. K. Mosyova. *Azidobrazoschnaya Prom.*, 408-501 (1934).—In the production of *p*-O₂NC₆H₄NH₂ (II) by nitration of PhNHCHO, the addn. of H₂O to the reaction mixt. results in the sapon. of *p*-O₂NC₆H₄NHCHO with the sepn. of *p*-O₂NC₆H₄NH₂ (I) as H₂SO₄ (III) at the concn. of 65% H₂SO₄ and that of (*p*-O₂NC₆H₄NH₂)₂ H₂SO₄ (III) at the concn. of 25-30% H₂SO₄, while the resinous matter and the *o*-isomer remain in soln. II filtered off and dissolved to 25-30% H₂SO₄ concn. gives also III, which on further diln. begins to hydrolyze with the liberation of I. III was directly used in diazotizing or converted with Na₂CO₃ into I. m. 147-8°. About 80% of the total HCO₂H was recovered from the mother liquor from II in the form of 16% acid by distn. at 50-60° and 680-80 mm., while the *o*-isomer was pptd. from the distn. residue by the addn. of 3 parts of H₂O. Chas. Blanc

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

SECTION SYMBOLS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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MOZGOVA, K. K.

Jan/Feb 49

USSR/Physics
Optics
Molecular Structures

"Influence of Molecular Structure of 9,10-Diaryl-Diamino Anthracenes of Their Optical Properties," N. D. Zhevandrov, V. L. Levshin, and K. K. Mozgova, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 18 pp

"Iz Ak Nauk SSSR, Ser Fiz" Vol XIII, No 1

Exhaustive investigation established following results: Introduction of substitutes into side chains of diaryl-diamino derivatives of anthracene had a marked influence on optical characteristics of their molecules, absorption and radiation spectra, luminescence yield, and duration of excited state. Nature of substitute had greatest influence, although position of substitute in side chain was also a factor. Duration of excited state in compounds studied varied from $8.6 \cdot 10^{-9}$ to $1.4 \cdot 10^{-9}$ sec, Luminescence yield in crystalline state was very high; in fact, it approached the maximum possible. Thus, concentrated extinguishing was almost lacking in the crystal state. Succeeded in comparing separate sections of spectra with different excitation conditions for the molecule.

PA 36/49T95

MOZGOVA, K. K.

PA 65/49T34

**Chemistry - Anthraquinone,
Derivatives
Synthesis**

Apr 49

"The Synthesis of 4-Chloro- and 4-Bromo-1-amino-
anthraquinone and Their Derivatives by Sandmeyer's
Reaction," K. K. Mozgova, Lab of Intermediate
Products and Dyes, Inst of Org Chem, Acad Sci
USSR, 3 1/2 pp

"Zhur. Obshch Khim" Vol XIX, No 4

Describes synthesis of the subject compounds,
and their benzoylated products. Submitted 31 Dec 47.

65/49T34

CA

Polycyclic compounds XI Effect of substituents on the color of 1-amino-4-substituted anthraquinones. A. M. Lukin and K. K. Morgova (Inst. Org. Chem., Acad. Sci. U.S.S.R.), *Zh. Obshch. Khim.* (J. Gen. Chem.) 20, 1504-9 (1950); cf. *C.A.* 34, 3749; 44, 1089c. The shift toward absorption of longer waves occurs in the order: NO₂, Cl, Br, MeO, HO, NH₂, NH, NMe, NHPh. The relative position of the 1st λ is different from that given by Schmidt (C.A. 22, 4232), probably because of different methods of observation (spectroscopically here; visually by Schmidt). All derivs. with HO or NH₂ or their derivs. give 2 max., while other 1,4-derivs. have only one. The absorption curves of all products are reproduced. 1-Aminoanthraquinone m. 253.5-4.5° (by sublimation). Nitration of its deriv. with mixed acid at 4-5° gave 1-amino-4-nitroanthraquinone m. 205° (from PhCl) 400 m μ , in EtOH 474. Debenzylation of Alcol Red G with H₂SO₄ at 100° gave 90% 1-amino-4-methoxyanthraquinone, m. 166.5-7.5° (from dil. AcOH), max. 502 (PhCl), 513 (EtOH). Heating β -BzNH₂Cl₂OH and β -C₆H₄(CO)₂OH with AlCl₃-NaCl and oxidation of the 1-benzamido-4-hydroxyanthraquinone with H₂O₂ and hydrolysis with 100% H₂SO₄, gave 70% 1-amino-4-hydroxyanthraquinone, m. 206.5-7.5° (from PhCl), max. 520 and 550 (PhCl), 525 and 556 (EtOH). 1,4-Diaminoanthraquinone, m. 207-7.6° (sublimed), max. 535 and 568 (PhCl), 541 and 584 (EtOH). 1-Amino-4-benzamidoanthraquinone, m. 279.5-81.0° (from PhCl), max. 525 and 558 (PhCl), 530 and 562 (EtOH). Condensation of 1-amino-4-bromo-2-

sulfanthraquinone (I) with Me₂NH in aq. CuSO₄ gave 60% 1-amino-4-(dimethylamino)anthraquinone, blue, m. 159.5-61.0°, max. 565 and 605 (PhCl), 565 and 604 (EtOH). Heating I with PhNH₂ in aq. CuSO₄ and treatment with Na₂SO₄ gave 60% 1-amino-4-(phenylamino)anthraquinone, m. 172.5-5°, max. 565 and 604 (PhCl), 565 and 606 (EtOH). 1-Aminoanthraquinone has max. 460 (PhCl), 475 (EtOH). XII. Effect of substituents on the color of 1-benzamido-4-substituted anthraquinones. *Ibid.* 1510-13. The order of absorption max. displacement by substituents is the same as that found for the 1-amino series. Benzoylation of 1-aminoanthraquinone gave 92% 1-benzamidoanthraquinone, golden yellow, m. 254.5-3.5°, max. 435 m μ (PhCl). Nitration gave the 4-nitro deriv., m. 290.1° (from PhNO₂), max. 435 (EtOH) 464. 1-Benzamido-4-methoxyanthraquinone (by crystal. of Alcol Red G) (from xylene), m. 245.4-6.4°, max. 462. The 4-*tert*-butyl analog (by benzoylation of the 1-amino analog), m. 253.5-4.0° (from PhCl), max. 492. 1,4-Dibenzamidoanthraquinone, m. 279.0-5° (from PhCl), max. 408. Benzoylation of 1-amino-4-(dimethylamino)anthraquinone gave the 1-benzamido deriv., m. 172.4° (from PhCl), abs. max. 552. Similarly was prepd. 1-benzamido-4-aminoanthraquinone, blue, m. 195.7° (from PhCl), max. 551. The 4-Cl analog, max. 440; 4-Br analog, max. 441 m μ . G. M. K.

Mozgova, K. K.

The use of $(\text{PN}, \text{Cl})_2\text{SbCl}_4$ in the preparation of organoantimony compounds. A. N. Nesmeyanov, N. K. Glbo, L. G. Makarova, and K. K. Mozgova, *Dokl. Acad. Sci. U.S.S.R. Div. Chem. Sci.* 1959, 211-4 (Engl. translation). See C.A. 48, 6301f. H. L. H.

No. 2007A, K.K.

The use of the salt $(PhN_2Cl)SbCl_4$ in the method of double diazonium salts. A. N. Nesmeyanov, N. K. Gipp, L. G. Zhurav, and N. S. Mozgova. *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 208-207; cf. C.A. 49, 432F. — $PhNH_2 \cdot HCl$ (83 g.) in 200 ml. MeOH was diazotized at -5° with 42 g. $AmONO$ and 45.6 g. $SbCl_4$ in 60 ml. MeOH was added, yielding a ppt. of 82.7 g. $(PhN_2Cl)SbCl_4$, decomp. about 100° , nearly insol. in EtOH and Me₂CO, decompd. by H₂O, and stable to mech. shock up to 40° . The salt (15 g.) in a flask provided with a narrow lower portion, was mixed with 50 ml. EtOAc, treated with stirring with 7 g. Zn dust, which resulted in a vigorous decompn., the flask cooled only when the foam began to subside after this initial action, the filtered soln. concd. *in vacuo*, dil. with MeOH or EtOH, poured onto 100 g. ice, 100 ml. H₂O, and 50 ml. of 25% NH_4OH , let stand several hrs., the resulting ppt. extd. with $CHCl_3$, and the extn. yield. yielding diphenylstibine oxide, which with $HCl \cdot EtOH$ gave 42-64% $PhSbCl_4$, m. $67-8^\circ$. To 4.65 g. $PhNH_2$, 5.75 g. $SbCl_4$, and 45 ml. EtOAc was added 10 ml. concd. HCl, then 3.7 g. $NaNO_2$ at $5-10^\circ$, the viscous mass treated after 40-5 min. with 6.5 g. Zn dust, rapidly cooled upon completion of the decompn., filtered, the filtrate concd. *in vacuo*, treated with 8N HCl, the org. layer poured on ice- NH_4OH , the resulting oil taken up in $CHCl_3$, and the ext. evapd., giving 50% $PhSb$, m. 88° (from ppt. other). If at the end of diazotization (above) 20 g. $CaCl_2$ is added and the mixture stirred 1-2 hrs. prior to decompn., there is formed 46.5% $PhSbCl_4$, m. $120-43^\circ$, and also 0.7 g. $PhSb$ deriv., isolated as $PhSbOAc$. The following yields (%) of

Ph_2SbCl_4 , $PhSbO$, and $PhSbOAc$, resp. were obtained at the indicated temps. when the decompn. was run in different solvents: EtOH, $40-50^\circ$, 15.2, 6.4, 3.7; Me₂CO, 50° , 6, 1.6, 13.2; C_6H_6 , 70° , traces only and the reaction is feeble; $CHCl_3$, 60° , 6, 0.8, 5.1, the reaction being feeble and requiring long heating; AmOAc, 130° , 2.4, 2.4, 17.2; iso-AmO, 100° , —, 3.2, trace, vigorous reaction; MeOH, 60° , —, 1.2, 13; HCO_2Me , 10.5° , —, 10, 13.5; H₂O, 75° , traces only of Sb derivs., along with 20% PhOH; liquid NH_3 , cooled with Dry Ice, no org. derivs. of Sb isolated, although the reaction is vigorous. The decompn. at $65-75^\circ$ was studied with other metals as well, and the yields (%) of the 3 product types (as given above) were: with Fe, —, 11, trace, in a vigorous reaction; Sb, 12, 28, 3, in a moderate reaction; Cu, trace, 12, trace, in a moderate reaction; Mg, —, 2.8, 7, in an energetic reaction after initial heating; Al, —, 8.8, —, in a weak reaction that needs external heating; amalgamated Al, same as Al, in a slowly starting reaction; Cu-Zn couple, 7.2, 4, 14.3, in a vigorous reaction; amalgamated Zn, —, 5.6, 10, in an energetic reaction.

G. M. Kosolapoff

Inst. Org. Chem., AS USSR

MOZGOVA, K. N.

Effect of compounds of low molecular weight on photochemical destruction of polystyrene. V. V. Korshak, K. N. Mozgova, and A. P. Zaslavskaya (Inst. Petrogr. Chem. Acad. Sci. U.S.S.R., Moscow). *Zhur. Obshch. Khim.* 21, 1886-74 (1957). It was shown that destruction of polystyrene by ultraviolet light is considerably retarded if polychromatic ultraviolet is replaced by a narrow band of 310-20 mμ. Addn. of substances of low mol. wt. also retards the decomn. Addn. of 1,4-diphenyl-1,3-butadiene was most effective in this respect. Addn. of bixanthylene accelerates the decomn., as does that of isoprene (which causes reduction of elasticity and reduction of strength of the polymer), and to a lesser degree di-Et 2,6-dihydroxyterephthalate. Salol, β-methylumbelliferone, and 2-(o-hydroxyphenyl)benzoxazole showed a slight tendency to cross link the polymer, while 2-hydroxy-1-naphthalazine showed protective property. The effects of the addends can be correlated with their spectroscopic and photochem. behaviors. G. M. K.

7
 1-4E3d
 1-4E4f
 1-4E2c(2)
 2-MAY

// MB
 qb

AUTHORS: Korobak, V. V., Mozgova, K. K. 62-58-5-26/27

TITLE: Letters to the Editor (Pis'ma redaktoru)
New Process for the Obtaining of Inoculation Copolymers (Novyy
sposob polucheniya privitykh sopolimerov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk
1958, Nr 5, pp. 651-651 (USSR)

ABSTRACT: The authors carried out a test for applying a new process of
inoculation (on the surface of the heterogeneous chain poly-
amides) of a carbochain polymer for the purpose of the modifi-
cation of the properties of the heterogeneous chain polyamides.
A process was achieved which guarantees the formation of a
layer of the copolymer on the surface of the heterogeneous
chain polyamide. This process consists in the formation of
peroxide-groups-on the surface of the polyamide- which produce
the formation of inoculated macromolecules of the carbochain
polymer in these places. This new method of obtaining of inocu-
lation copolymers of the polyamides with carbochain polymers
proved useful also in the case of such heterogeneous chain
polyamides as poly- ϵ -caproamide and the mixed polyamide (amide
G-669); in the case of polyester: Polyethylterephthalate

Card 1/2

Letters to the Editor. New Process for the Obtaining of Inoculation 62-58-5-26/27
Copolymers

(lavsan).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute for Elemental-organic Compounds AS USSR)

SUBMITTED: February 28, 1958

1. Cyclic compounds--Properties
2. Molecular structure--Determination
3. Stereochemistry--Applications

Card 2/2

AUTHORS:

Korshak, V. V., Mozgova, K. K.,
Zaseckina, A. P.

SP7/79-29-10-10/6c

TITLE:

The Influence of Low-Molecular Compounds on the Photo-chemical Destruction of Polyethylene Terephthalate (Vliyaniye nizkomolekulyarnykh veshchestv na fotokhimicheskuyu destrukttsiyu polietilentereftalata)

PERIODICAL:

Zhurnal obshchey khimii, 1958, Vol 28, Nr 10,
pp 2847 - 2853 (USSR)

ABSTRACT:

In the paper under discussion, the conversion process of polyethylene terephthalate (Lawsan) under the influence of the full irradiation by a lamp PRK-2 on this polyester, as well as of the closer spectral region within the limits of 300-320 mμ, was investigated. At the same time, an attempt was made to determine the influence of certain low-molecular compounds of various structures on the conversion process of polyethylene phthalate on full ultraviolet irradiation. The samples of this compound available to the authors did not yield fully uniform absorption spectra; they differed from those already published, i.e., probably, to the

Card 1/2

The Influence of Low-Molecular Compounds on the Photo-chemical Destruction of Polyethylene Terephthalate

SOV/79-244-10,10

difference in the composition of the polyester (Ref 6). The absorption spectra of the compounds enumerated are listed in the preceding report (Ref 7). The changes in the properties of the irradiated foils were determined from the changes in molecular weights, mechanical properties, and spectral characteristics. It was found that the decomposition of polyethylene terephthalate on full ultraviolet irradiation by the above mentioned lamp occurs far more intensively than on irradiation at a wave length of 300-320 mp. The addition of low-molecular organic compounds to the polyethylene terephthalate affects its decomposition process. The results obtained harmonize with those arrived at under identical conditions on the decomposition of polystyrene. There are 6 figures, 1 table, and 8 references, 1 of which are Soviet.

SUBMITTED: August 5, 1957
Card 2/2

KORSHAK, V.V.; MOZGOVA, K.K.; SHKOLINA, M.A.

Preparation of graft copolymers of polyimides with vinyl monomers.
Dokl. AN SSSR 122 no.4:609-611 0 '58. (MIRA 11:11)

1. Institut elementoorganicheskikh soedineniy AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Korshak).
(Polymers) (Amides)

KORSHAK, V.V.; MOZGOVA, K.K.; LAVRISHCHEV, V.P.

Effect of low molecular compounds on the photochemical decomposition
of the polyamide anide G-669. Vysokom.sped. 1 no.7:990-997 J1 '59.
(MIRA 12:11)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Amides)

KORSHAK, V.V.; MOZGOVA, K.K.; LAVRISHCHEV, V.P.

Effect of low molecular weight organic compounds on the
process of photochemical destruction of ϵ -polycaproamide.
Vysokom.soed. 1 no.8:1159-1163 Ag '59. (MIRA 13:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Hexanamide) (Photochemistry)

KORSHAK, V.V.; MOZGOVA, K.K.; LAVRISHCHEV, V.P.

Effect of low molecular weight compounds on the photo-
chemical destruction of the polyamide anide G-669. Vysokom.
soed. 1 no.8:1164-1169 Ag '59. (MIRA 13:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Amides) (Photochemistry)

KORSHAK, V.V.; MOZGOVA, K.K.; SHKOLINA, M.A.

Preparation of graft copolymers. Part 3: Grafting of vinyl monomers
on polyamides. Vysokom. soed. 1 no.9:1364-1368 S '59.
(MIRA 13:3)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Polymers) (Amides)

KORSHAK, V.V.; MOZGOVA, K.K.; SHKOLINA, M.A.

Preparation of graft polymers. Part 4: Grafting of styrene on polyamides. Vysokom.soed. 1 no.11:1573-1579 N '59.
(MIRA 13:5)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Polymers) (Styrene) (Amides)

4
KORSHAK, V.V.; MOZGOVA, K.K.; SHKOLINA, M.A.

Preparation of graft copolymers. Part 5: Grafts by vinyl monomers on polyethylene terephthalate. Vysokom.soed. 1 no.11:1604-1609 N '59. (MIRA 13:5)

1. Institut elementoorganiheskikh soyedineniy AN SSSR.
(Terephthalic acid) (Vinyl compounds)

5(2)

SOV/7A-28-7-1/5

AUTHORS:

Kerzhak, V. V., Mozgova, K. K.

TITLE:

Inorganic High-molecular Compounds (Neorganicheskiye vysokomolekulyarnyye soyedineniya)

PERIODICAL:

Uspekhi khimii, 1959, Vol 28, Nr 7, pp 783 - 825 (USSR)

ABSTRACT:

In order to show the present-day stage and the development trends in the field of inorganic polymers the authors have generalized in the present paper the material assembled so far. As it is impossible to treat all details concerning these compounds the authors refer to the special monographs dealing with this subject (Refs 2-8). The same applies to the articles on experimental methods in the field of polymeric chemistry (Refs 9-14). The first to attempt a classification of inorganic polymers was Meyer (Ref 11). Since, however, the number of compounds belonging to this group is considerable, a classification which is based on the structure of macromolecules only, and not on their chemical composition, is insufficient. For this reason the authors use the classification proposed by one of them (Refs 15-17). On the basis of this classification all high-molecular compounds are divided, according to their composition, into two main groups. The first group comprises having homogeneous chains, the second compounds having heterogeneous chains. The problem of classi-

card 1/4

I. Organic High-molecular Compounds

SIY/20-00-001/5

fiction is also dealt with in references 19, 15, etc. Furthermore, high-molecular compounds have to be classified in two groups, according to their structure: 1) compounds with one state of aggregation only; 2) compounds having two states of aggregation. The organic high polymers mainly comprise polymers with homogeneous (carbon) chains, the inorganic high polymers, however, mostly have heterogeneous chains. The capacity of forming polymers is unquestionably dependent upon the position of the respective elements in Mendeleev's periodic system (Fig 1). The systematic distribution of the elements is also even more clearly by the periodic system interpreted by Bohr (Fig 2). It is seen that elements forming polymers occupy an intermediate position between metals and elements which do not form polymers. Table 1 contains data on the strength of the bonds of various elements. In a study of polymers with homogeneous chains it was found that there are relatively few elements which are able to form such polymers. In the case of polymers with heterogeneous chains their number increases considerably. Among the polymers with heterogeneous chains there is a special group of complex compounds, which have been thoroughly discussed in Grinberg's monography (ref 23).

Card 2/4

Inorganic High-molecular Compounds

SOV/74-28-7-1/5

The polymers with homogeneous chains are explained in the order in which the elements by which they are formed appear in the periodic system. Table 3 lists the most important properties of these polymers. Furthermore, various polymers of this group are described (Refs 24-97). The number of inorganic compounds of high molecular weight belonging to the group of polymers with heterogeneous chains is extremely large. These compounds are usually formed by the inclusion of atoms of another element between atoms of the respective element. The most frequent compounds of this type are oxygen compounds - polymeric oxides, nitrogen compounds - polymeric nitrides, carbon compounds - polymeric carbides, and boron compounds - polymeric borides. The group of complex compounds has not yet been subjected to a thorough investigation, but there is no doubt that polymeric compounds with coordinate bonds will form an important part of the chemistry of polymers. Furthermore, polymeric compounds are shown in the order in which the elements by which they are formed appear in the Mendeleev system: Group I (Refs 98-100), Group II (Refs 101-110), Group III (Refs 111-131), Group IV (Refs 132-356), Group V (Refs 357-399), Group VI (Refs 400-424), Group VII (Refs 425 - 427), Group VIII (Refs 428-434).

Card 3/4

Inorganic High-molecular Compounds

SOV/74-8-7-1/5

The present paper intended to show the influence of the nature of individual elements on their capacity to form polymers and the effects of this capacity on the properties of the polymers. At the same time the peculiarities of inorganic high-molecular compounds due to which these differ from organic compounds were shown. The difference is explained by the fact that in the case of organic polymers there are more linear carbon chain structures, while in the case of inorganic compounds steric structures with heterogeneous chains prevail. There are 17 figures, 4 tables, and 434 references, 100 of which are Soviet

ASSOCIATION: In-t elementoorganicheskikh soyedineniy AN SSSR Moskva (Institute of Elemental-organic Compounds, Academy of Sciences, USSR, Moscow)

Card 4/4

83707

S/190/60/002/006/012/012
BO'5/BO64

15.8107 also 2209

//.2217

AUTHORS:

Korshak, V. V., Mozgova, K. K., Shkolina, M. A.

TITLE:

Letters to the Editor. New Method of Producing Grafted
Polymers //

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960. Vol. 2, No. 2.
pp. 957-958

TEXT: In continuation of the experiments in the course of which already a new method of producing graft copolymers has been developed (Refs 1-5), it was observed that film and fiber samples of polyamides and polyesters obtain a higher amount of active centers by storage in the air; this grafting with monomers can be carried out also without a preliminary treatment with ozone. A new, simpler method of producing graft copolymers was developed on this basis, i.e. articles in the form of films and fibers are for some time heated in the air before copolymerization. This preliminary treatment leads to the formation of active centers so that at a further heating with vinyl monomers copolymerization takes place. The graft copolymers obtained have a higher mechanical strength than the

Card 1/2

83707

Letters to the Editor. New Method of
Producing Grafted Polymers

S/190/60/002/006/012/C-2
B015/B064

copolymers obtained by the above method with ozone (Refs 1-5) It was found that heating can also in nitrogen atmosphere be conveniently carried out. The polymer was assumed to contain some absorbed air which causes successive oxidation under the formation of peroxide centers under the usual storage conditions. Thermal preliminary treatment causes apparently a decomposition of these peroxide centers to free radicals which initiate a further copolymerization with the vinyl monomers. A final statement with respect to the mechanism of this reaction can only be made after the authors have finished their present experiment. There are 8 Soviet references.

SUBMITTED: March 7, 1960

Card 2/2

KORSAK, V.V. [Korshak, V.V.]: MOZGOVA, K.K.

Inorganic macromolecular compounds. Analele chimie 15 no.1:37-88
Ja/Mr '60. (EEAI 9:8)

(Macromolecular compounds)
(Inorganic compounds)

KORSHAK, V.V.; VINOGRADOVA, S.V.; FRUNZE, T.M.; GRIBOVA, I.A.;
ZHDANOV, A.A.; MOZGOVA, K.K.; KRONGAUZ, Ye.S., red.izd-va;
TIKHOMIROVA, S.G., tekhn.red.

[Chemistry and technology of synthetic macromolecular compounds.
Heterocyclic compounds]. Khimiia i tekhnologiya sinteticheskikh
vysokomolekuliarnykh soedinenii. Geterotsepye soedineniia.
Moskva, Izd-vo Akad.nauk SSSR. 1961. 721 p. (Itogi nauki:
Khimicheskie nauki, no.7) (MIRA 14:11)

1. Chlen-korrespondent AN SSSR (for Korshak).
(Macromolecular compounds)
(Heterocyclic compounds)

28177

53830

S/19C/61/003/010/005/019
B13C/B110

AUTHORS: Korshak, V. V., Mozgova, K. K., Shkolina, M. A.

TITLE: Synthesis of graft copolymers. VII

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no 10, 1961,
1462-1467

TEXT: The authors describe the possibility of producing graft copolymers from polyamide and polyester films and vinyl monomers without the use of ozone. Films of mixed polyamide П-669 (G-669) stored for different periods of time were used for the investigation. The monomer used was styrene. Tests showed that a freshly prepared polyamide grafted only 2-3% polystyrene, a one-year old up to 9%, and a 6-year old 30-60%. In the 6-year old polyamide, active centers formed by the action of atmospheric oxygen and moisture. The effect of atmospheric oxygen and air was studied at various temperatures. It was shown that a sample grafting no more than 2.5% polystyrene, grafted 20% after thermal treatment in air at about 80°C. In thermal treatment of caprone films, grafting was also

Card 1/3

28177

S/190/61/003/010/005/0'9
B130/B110

Synthesis of graft copolymers. VII

increased but not to such an extent as in the treatment of G-669. Lavsan films heated in nitrogen showed better grafting than those not heated, but did not attain such a degree as when heated in an air flow. The tests also showed that the heating did not only activate the polymers but also improve their mechanical properties. The breaking elongation of Lavsan

films heated at 80°C increased by 48.8%, that of caprone films by 176%. No positive results have been obtained yet when trying to find free radicals by an epr spectrum. Infrared and ultraviolet spectra showed no

considerable change due to thermal treatment of caprone. The ultraviolet spectrum of heated Lavsan suggested a formation of groups containing CO

γ-ray patterns showed higher orderliness of the molecular chain of heated samples. The breaking elongation of samples was tested at the VNIIS, the infrared and ultraviolet spectra were taken at I. V. Obreimov's laboratory, and A. I. Volkova assisted in experiments. There are 2 figures, 8 tables, and 6 Soviet references.

Card 2/3

28177

Synthesis of graft copolymers. VII

S/190/6:/003/010/005/019
B130/B110

ASSOCIATION: Institut elementoorganicheskikh sovedineniy AN SSSR
(Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: November 3, 1960

Card 3/3

29736

S/190/61/003/C11/005/016
B124/B101

15 55 40

2205

AUTHORS: Korshak, V. V., Mozgova, K. K., Shkolina, M. A.

TITLE: Synthesis of graft copolymers. VIII

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 11, 1961, 1655-1660

TEXT. Results obtained when styrene is grafted to heat-activated caprone fiber are given in this paper. The effect of the time of thermal treatment of the fiber on the yield of grafted polystyrene is studied at temperatures ranging from 80 to 150°C in a nitrogen stream and in air (Fig. 1). Up to 20 min from the beginning, active centers of copolymerization of the fiber with styrene are formed at 80°C in nitrogen, with no further oxidation of the fiber occurring on heating. When kept at a constant temperature of 80°C in air, two maxima appear, the first of which is due to the presence of active centers prior to heat treatment, and the second to the secondary formation of active groups by oxidation. From data given in Fig. 1 it can be further concluded that the yield of grafted polystyrene increases with the time of copolymerization, and that the formation of active centers in the fiber is accelerated by a temperature rise. Maximum yield of graft

X

Card 1/02

Synthesis of graft copolymers. VIII

2734
S/190/61/005/01: 005, 015
B124/B101

copolymer is obtained when the fiber is kept at 110°C in a thermostat for 3 min, with true temperature in the thermostat and, thus, also of the sample being about 90°C. From measured viscosity values of the graft copolymers, optimum results were obtained under the same conditions as mentioned (Table 1). A polystyrene layer can be grafted to the caprone fiber with yields up to 30 % and a molecular weight up to 60,000-80,000 (Table 2). It is shown that the described grafting takes place essentially on the surface of the polymer. A. P. Zasechkina and A. I. Volkova took part in experimental work. There are 3 figures, 2 tables, and 5 references: 4 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: A. J. Goldberg, W. P. Hohenstein, H. Mark, J. Polymer Sci., 2, 503, 1947.

ASSOCIATION Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elemental Organic Compounds AS USSR)

SUMMARY December 1, 1960

Card 2/2

41419
S/190/62/004/010/003/010
B144/B186

Korshak, V. V., Mozgova, E. K., Zhkolina, M. A.,
Korostylev, E. N., Linov Lakaya, O. Ya., Zasechkina, A. F.

AUTHOR:

Synthesis of graft copolymers

TITLE:

Vysokomolekulyarnyye soyedineniya, v. 4, no. 10, 1962,
1462-1475

TEXT: The copolymerization of polyethylene terephthalates ("Lavsan",
Hortaphan, Cronar) with monomer and monomer mixtures was studied in an
attempt to increase the adhesiveness between (I) and the photographic
emulsion layer containing gelatin. After a heat treatment of no more
than 1 hr at 20 - 120°C, the samples were kept immersed in the
monomer or monomer mixture for 7 - 44.5 hrs at 40 - 80°C. 2-methyl-5-
vinylpyrrolone, vinyl pyrrolidone, and methyl methacrylate (II) were used
 singly or in mixtures with acrylonitrile, methacrylic acid (III), epoxy
 resin, styrene, carbonyl cement, and gelatin dissolved in acrylic acid
 (IV). After treatment with solvents such as benzene or water, and
 desiccation, the adhesiveness was examined by way of the 5-ball system.

Synthesis of graft copolymer

1/196/62/264/10/23/100
8144/2106

The tensile strength of a film of the copolymer was tested with a Schopper
by means of a long ribbon of 1 mm, 1 cm, 1 m, 1 km, 10 km, 100 km, 1 m.
The results were similar. The tensile strength was reached by
copolymer (I) and (II-III) films independently of their mixing
ratio, and also (IV) in thin polymer layers (1 - 2 μ by weight). The
viscosity could not be tested, but (I) after grafting, was no longer
soluble in xylene. Grafting reduced the elongation at rupture, whilst
slightly increasing the tensile strength, but did not affect the optical
properties and orientation. There are 1 figure and 1 tables.

ADDRESS: Institut elementoorganicheskikh soedineniy AN USSR
(Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: May 20, 1961

Card 2/

S/190/62/004/011/002/01A
B119/2186

Korshak, V. V., Mozgova, K. K., Krukovskiy, S. P.

AUTHORS:

Synthesis of graft copolymers. X. Grafting of styrene onto polyethylene terephthalate (Lavsan)

TITLE:

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 11, 1962, 1625 - 1630

TEXT: Lavsan films of about 50 μ thickness were copolymerized with styrene at 80 $^{\circ}$ C after activation by heating in air at 100 $^{\circ}$ C. The copolymer yield depends on the activation time of the Lavsan films; it shows a large maximum after 3 min heating, and a smaller maximum after 15 min. The copolymer yield increases with the duration of the copolymerisation reaction; a film activated for 3 min absorbs about 70% of its weight of styrene after an 8-hr reaction. About 5% of the styrene quantity used is homopolymerized. The intrinsic viscosity of solutions of grafted films in tricresol increases with the amount of styrene absorbed, reaching a maximum of 1.569 when the content of grafted styrene in relation to the weight of the film used is 106.7%. With growing

Synthesis of graft copolymers...

S/190/62/004/011/002/014
B119/B186

polystyrene content in the copolymer the tensile strength of films decreases, and their relative ductility increases. The grafted films (like pure Lavsan) have a melting temperature of $240 - 242^{\circ}\text{C}$. Lavsan films containing 50 - 100% polystyrene undergo only swelling in cold concentrated H_2SO_4 , and are not destroyed by boiling 40% KOH even after 100 hrs. There are 6 figures and 2 tables.

ASSOCIATION: Institut elementoorganicheskikh sovedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: June 2, 1961

Card 2/2

2

KORSAK, Y.V., MOZGOVA, K.K., SHKOLINA, M.A.

Surface grafting of vinyl monomers.

Report submitted for the International Symposium of Macromolecular chemistry
Paris, 1-6 July 63

9/190/63/005/002/002/024
B1G1/B1G2

AUTHORS: Korshak, V. V., Nozdravskaya, E. A., Shkolina, M. A.,
Nagdiaseva, I. I., Shkolina, E. A.

TITLE: Synthesis of graft copolymers. XII

PERIODICAL: Vysokomolekulyarnyye soedineniya, v. 5, no. 2, 1963,
171-175

TEXT: Tests are discussed in reference to the grafting of acrylic and methacrylic acids onto caprone fiber at room temperature and the stabilization of the graft copolymer by metal salts. Commercial caprone threads with Schopper strength 14.3 kg were heated at 80-120°C and then immersed for a short time in anhydrous acrylic or methacrylic acid at room temperature. This mild treatment, chosen because of the sensitivity of the polyamide to acids, yielded only a thin skin film on the fiber, so the grafting could not be determined from the increase in weight of the fiber. In the threads of graft copolymer, the strength was considerably reduced after 100 hrs heating at 150°C; the highest value was 38% residual strength. Treatment of the threads of graft copolymers for several hours with 2.5-5%

Card 1/2

Synthesis of graft copolymers. XII

51.1/2102
51.1/2102

solutions of cadmium, magnesium, zinc, manganese or copper acetate showed that with copper acetate the residual strength was still 95% after 100 hrs at 150°C. The threads were colored pale blue and Cu²⁺ could be identified qualitatively. The films consisting of the copper salt of polyacrylic or polymethacrylic acid protect the fibers from heat. There are 4 tables.

ASSOCIATION: Institut elementorganicheskikh soedineniy AN SSSR
(Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: July 21, 1961

Card 2/2

5/190/63/005/003/007/024
B101/B186

AUTHORS: Korshak, V. V., Mosgova, E. K., Shkolina, M. A., Uzina, R. V.,
Ionova, T. V.

TITLE: Synthesis of graft polymers. XIII

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 3, 1963, 338-341

TEXT: In order to achieve better adhesion between rubber and cord, grafts were made of fiber polymers on viscose or caprone fibers. For this purpose the fiber was either treated with ozone for 10 to 300 min or was heated to 90 - 110°C for 1 - 5 min. Subsequently they were treated with carboxyl containing divinyl latex, divinyl methylvinylpyridine latex, divinyl acrylonitrile latex or with styrene, methylmethacrylate, acrylic or methacrylic acids, 2-methyl-5-vinyl-pyridine or mixtures of these monomers. With acrylonitrile, acrylic or methacrylic acids the homopolymers developed so rapidly that no grafted polymers were obtained. Grafting was achieved by changing the temperature conditions or by using mixtures. Thus an addition of styrene had a strongly inhibiting effect on the formation of acrylonitrile homopolymers. As an example, the increase in strength of the bond between natural rubber and polyamide fiber is mentioned which is due to
Card 1/2

Synthesis of graft polymers. XIII

S/190/63/005/003/007/024
B101/B186

grafting of methylvinylpyridine copolymer onto the fiber. The bend strength of the non-grafted fiber was 0.7 kg/cm. After a 40-hr grafting of the fiber with 2-methyl-5-vinylpyridine it increased to 0.87, after 5 hr grafting with the same compound it increased to 0.94, and after impregnation of the fiber with divinyl-2-methyl-5-vinyl pyridine-latex to 1.5 kg/cm. The unfavorable effect of excessively long grafting is explained by the formation of an excessively branched surface layer, thus covering the major part of the nitrogen atoms of the pyridine rings so that they cannot interact with the rubber-fiber interface. There are 4 tables.

ASSOCIATION: Institut elementoorganicheskikh soedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: August 5, 1961

Card 2/2

ACCESSION NR: AP3001572

8/0191/63/000/006/0009/0011

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Krakovskiy, S. P.

TITLE: Preparation of graft copolymers. Graft copolymers of polyethylenesterphalate (lavsan) and styrene.

SOURCE: Plastiicheskiye massy, no. 6, 1963, 9-11

TOPIC TAGS: graft copolymers, polyethylenesterphalate, lavsan, styrene, oxidative destruction, ozonization, copolymer viscosity

ABSTRACT: Lavsan films were treated with ozone for varying lengths of time and then grafted with styrene. The yield of copolymer depends on the duration of the ozonization and of the copolymerization. The ozonization is accompanied by progressive oxidative destruction of the polymer and it is concluded in a discussion of the mechanism that the benzene rings also are cleaved to give oxygen-rich compounds. The highest copolymer viscosity was obtained when approximately 100-110% of styrene was grafted to the film. Orig. art. has 2 tables and 4 figures.

ASSOCIATION: none

SUBMITTED: 00
Card 1/2

DATE ACQ: 01Jul63

ENCL: 00

E 13364-63

EPF(z)/EPR/EWP(j)/BDS/EWT(m) AFFTC/ASD Pr-4/PS-4/

Pc-4 RM/WW

ACCESSION NR: AP4006299

S/0191/65/000/007/0005/0007

AUTHORS: Korshak, V. V.; Mozgova, E. K.; Krahovskiy, S. P.

72

TITLE: Preparation of graft-copolymers of polyethyleneterephthalate (Dacron) and methylmethacrylate.

SOURCE: *Plasticheskiye massy*, no. 7, 1965, 5-7

TOPIC TAGS: graft-copolymer, polyethyleneterephthalate, dacron, methylmethacrylate

ABSTRACT: The process of preparation of graft copolymers of dacron and methylmethacrylate and the study of their properties has been investigated. Prior to reaction, the samples of dacron were first activated by heating them in an atmosphere of air or ozone, afterwards the films were heated to a temperature of 700 with methylmethacrylate. The investigation of the graft copolymerization process, described above, showed that the quantity of grafted polymethylmethacrylate primarily depends on two factors: the length of activation of dacron and the time duration of copolymerization. It was observed that the maximum quantity of grafted polymethylmethacrylate is obtained when the dacron film activated in air is heated only for a short period of time. The increase of activation time results in the decrease of grafted polymer. In case of activation of the dacron film

Card 1/2

L 13364-f

ACCESSION NO: APO00289

In ozone, the quantity of grafted polymethylmethacrylate increases with an increase of ozone activation time. The grafted copolymers vary from one another by their density which is dependent on the applied method of activation of the film. Orig. ext. has: 1 table and 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 30Jul68

EROL: 00

SUB CODE: CR

NO KEY SOV: 000

OTHER: 000

2/2

Card

KORSHAK, V.V.; MOZGOVA, K.K., kand. khim. nauk

Graft copolymers. Vest. AN SSSR 33 no.10:37-42 0 '63.
(MIRA 16:11)

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

5. 17232-65 BDS/EWT(m)/EPR/EWP(j)/SPF(c)--AFFTG/ASD--Ps-4/Pc-4/
PR-4--RR/WW/MAY
ACCESSION NR: AP3006594 S/0020/63/151/006/1332/1334

AUTHOR: Korshak, V. V. (Corresponding member, AN SSSR); Mozgova,
K. K.; Babchinitser, T. M.

TITLE: Preparation of graft copolymers. Copolymers of polytetra-
fluoroethylene and methyl methacrylate

SOURCE: AN SSSR. Doklady*, v. 151, no. 6, 1963, 1332-1334

TOPIC TAGS: polytetrafluoroethylene, teflon, methyl methacrylate,
copolymer, polytetrafluoroethylene poly(methyl methacrylate) co-
polymer, silent electrical discharge, activation, adhesive strength,
silent electrical discharge activation, infrared spectra, graft
copolymer, polymer metal adhesion, activation mechanism, property
modification

ABSTRACT: Copolymerization of methyl methacrylate with films of
polytetrafluoroethylene (PTFE) preactivated by the silent-discharge
method have been studied in an attempt to improve the poor adhesive
properties of PTFE. The elemental composition, infrared spectra,

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L 17232-63

ACCESSION NR: AP3006594

and adhesion to metals of the graft copolymers were determined. The PTFE film was activated by silent discharge (frequency, 50 cps; voltage, 22—30 kv) in a mixture of air and oxygen for 10—30 min in a specially constructed apparatus. The activated PTFE film was then placed in a vessel containing methyl methacrylate, and bulk polymerization of the methyl methacrylate was conducted at 85—90°C, to a degree of conversion of 4—5%. The film was then treated with boiling dichloroethane and acetone to remove the homopolymer and dried to constant weight. The properties of the dry film were determined and compared with the properties of the initial PTFE. Table 1 of the Enclosure shows the results of the grafting of methyl methacrylate to a PTFE film 40 μ thick. In individual experiments yields of 7—8% on the initial PTFE were obtained for the grafted layer. Comparison of the infrared spectra of the initial and the grafted PTFE shows two new absorption bands, 3000 cm^{-1} and 1450 cm^{-1} , for the latter, corresponding to the valency and deformation vibrations of the CH_3 groups. The grafted PTFE-to-steel adhesive bond strength ranged from 5 to 25 kg/cm^2 , depending on the amount of methyl methacrylate grafted. It was assumed that

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L 17232-63

ACCESSION NR: AP3006594

4

in the activation of the film, gas ionization due to the silent electrical discharge led to the formation of reactive radicals on the surface of the PTFE film. These radicals initiate the grafting reaction. With the cooperation of Ya. S. Lebedev of the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR) the authors studied the EPR of the activated film, but did not obtain characteristic polymeric or peroxide radicals of PTFE, such as were obtained by Rexroad and Gordy (R. N. Rexroad, N. Gordy, J. Chem. Phys. 30, 395, (1959) on irradiation of PTFE. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

SUBMITTED: 20May63

DATA ACQ: 27Sep63

ENCL: 01

SUB CODE: CH, MA

NO REF SOV: 001

OTHER: 002

Card 3/13

L 32590-66 EWT(m)/EMP(v)/EMP(j)/T IJP(c) WW/JWD/DJ/RM

ACC NRI AR5023721

SOURCE CODE: UR/0081/65/000/013/S010/S010

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Babchinitser, T. M. 13

TITLE: Modification of the properties of fluorine-containing polymers

SOURCE: Ref. zh. Khimiya, Abs. 13S59

REF SOURCE: Sb. Tezisy dokl. Vses. konferentsii po khimii ftororgan. soyedeniy. Novosibirsk, 1964, 27

TOPIC TAGS: polytetrafluoroethylene, polytrifluorochloroethylene, styrene, methylmethacrylate, adhesion

ABSTRACT: In order to increase the adhesion to metals of polytrifluoroethylenechloride, a polytetrafluoroethylene graft of styrene, methylmethacrylate and other monomers was made to films of these polymers. To increase the activation process of the film, it was previously conditioned by a slow electric discharge. The results of the studies of the reaction mechanism of fluorine layers with vinyl monomers are given. A. Sorokin

SUB CODE: 11,20/ SUBM DATE: 10Jul65

Card 1/1 BK

ACCESSION NR: AP4033389

8/0062/64/000/004/0716/0720

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Babchinitser, T. M.

TITLE: Production of graft copolymers. Communication 17: copolymers of polytrifluorochloroethylene with vinyl monomers.

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1964, 716-720 and bottom half of insert facing p. 712

TOPIC TAGS: graft copolymer, polytrifluorochloroethylene, polytrifluorochloroethylene styrene graft copolymer, polymer film, powder, x ray analysis, crystallinity, solvent stability, swelling, polymer morphology, activation center, mechanism

ABSTRACT: As a continuation of their earlier work (Vy*sokomolekul. sovedineniya 5, 1451, (1963)), the authors studied the process of grafting vinyl monomers onto polytrifluorochloroethylene films. It is possible to form graft copolymers of polytrifluorochloroethylene and styrene without activating the initial polymer; the maximum yield was about 10%, based on initial sample, of grafted layer. X-ray studies showed the graft does not change the crystallinity of polytrifluorochloroethylene. The stability to solvents compared with copolymers formed by radiation

Card— 1/2

ACCESSION NR: AP4033389

grafting: weight loss after 50 hours in boiling benzene was 1.8-2%. Swelling reaches a maximum in 10 minutes and amounts to 10% of the weight of the film. A study of the grafting process at 75 C indicated reaction was most rapid in the first 6-8 hours, with 6.5-7.5% yield; reaction for 16 hours increased the yield by only 1.5-2%. The greater activity of the polytrifluorochloroethylene film than of the powdered polymer toward grafting indicates the presence of activation centers which may be formed by thermal oxidation during processing, and is also attributed to the morphology of the polymer. Orig. art. has: 1 equation, 7 figures and 1 table.

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk SSSR
(Institute of Organometallic Compounds, Academy of Sciences, SSSR)

SUBMITTED: 10Oct62

ENCL: 00

SUB CODE: OC, MT

NO REF SOV: 005

OTHER: 005

Card 2/2

ACCESSION NR: AR4030377

S/0190/64/006/003/0571/0571

AUTHORS: Korshak, V. V.; Mozgova, K. K.; Yagorova, Yu. V.

TITLE: A new method of synthesizing multilayer graft copolymers

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 3, 1964, 571

TOPIC TAGS: polymer, copolymer, graft copolymer, multilayer copolymer, dacron, caprone, polystyrene, polymethylmethacrylate, vinyl monomer, pemosor

ABSTRACT: The authors found it possible to graft repeatedly certain vinyl monomers to polymers, thus obtaining the so-called "pemosor" (repeatedly grafted) copolymers. The pemosors obtained in this manner have a high molecular weight and are not of tridimensional structure, since they dissolve readily in solvents, such as tricresol. The authors used dacron and caprone as the base and grafted thereon (repeatedly) polystyrene or a succession of polystyrene and polymethylmethacrylate layers, as well as other vinyl monomers. After a five-fold graft of styrene on dacron the total increase in weight was 1120%, and the viscosity in tricresol was 1.31. The grafting in succession of styrene and methylmethacrylate layers on

Card 1/2

ACCESSION NR: AP4030377

dacron yielded a product with a summary increase in weight of 195%, and with viscosity in tricresol of 2.74. On a caprone base, a four-fold graft of styrene yielded a product with a 501% increase in weight and a viscosity in tricresol of 3.31. A polymer, obtained on a caprone base by grafting several layers of polystyrene and polymethylmethacrylate, showed a 380% summary weight gain and a viscosity in tricresol of 12.58.

ASSOCIATION: none

SUBMITTED: 31Aug63

SUB CODE: CC

DATE ACQ: 07May64

NO REF SOV: 001

ENCL: 00

OTHER: 001

Card 2/2

I 51525-65 EAT(m)/EAP(j)/T Pc-1 RM
ACCESSION NR: AP5015300

UR/0288/65/020/005/0069/0069
676.71/76

AUTHOR: Korshak, V. V.; Morgova, K. K.; Zasechkina, A. P.; Khamitsova, V. M.;
Got'ye, T. N.; Karpova, G. D.; Morgun, L. A.

TITLE: A method for producing polyamide fiber. Class 39, No. 1/0672 65

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 69

TOPIC TAGS: polyamide resin, thermal stability, methacrylate, acrylic acid

ABSTRACT: This Author's Certificate introduces: 1. A method for producing poly-
amide fiber by polymerization of ϵ -caprolactam. A copper salt of the copolymer of
methylacrylate and acrylic acid is added to the monomeric ϵ -caprolactam to improve
the resistance of the fiber to heat and light. 2. A modification of this method in
which the amount of copper salt added is 0.01%.

ASSOCIATION: none

SUBMITTED: 02Mar62

ENCL: 00

SUB CODE: 00, GC

NO REF SOV: 000

OTHER: 000

Card 1/1

L 20803-66 EWP(j)/EWT(m)/I RM/WM

ACC NR: AP6005941 (A) SOURCE CODE: UR/0191/66/000/002/0001/0002

AUTHORS: Korshak, V. V.; Mozgova, K. K.; Yegorova, Yu. V.

ORG: none

TITLE: Preparation of multiple grafted copolymers *7445* 24
B

SOURCE: Plasticheskiye massy, no. 2, 1966, 1-2

TOPIC TAGS: graft copolymer, polyethylene terephthalate, polystyrene, monomer

ABSTRACT: Polyethylene terephthalate¹(I) and poly-ε-caproamide were subjected to multiple grafting with a variety of vinyl monomers, using a method previously described by V. V. Korshak, K. K. Mozgova, and M. A. Shkolina (Vysokomolek. soyed., 2, 957, 1960). Up to 30 samples of various copolymers were prepared, some of which contained up to 5 layers of successively grafted polymer, e.g., polystyrene¹(II). The yield of copolymer of I and II thus obtained was 1120% (assuming that the weight of starting sample is 100%). Increasing the time of a single grafting (32 hours) yielded less of the grafted polymer (47%) than multiple grafting lasting the same time. The reason for such behavior is explained by a renewal of active centers on the polymer samples by removing them at intervals, washing in benzene,

Card 1/2 UDC: 678-13 ²

L 20803-66

ACC NR: AF6005941

and drying at 60C. Properties of multiple grafted copolymers are under investigation. Orig. art. has: 2 tables.

SUB CODE: 11/ SUBM DATE: none

Card 2/2 *S*

LOKSHIN, R.V.; MOZGOVA, K.K.; KORSHAK, V.V.; YEGOROVA, Yu.V.

Graft copolymers. Mechanism of grafting into polyethylene terephthalate. Dokl. AN SSSR 166 no.1:118-121 Ja '66. (MIRA 19:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Korshak). Submitted April 20, 1965.

L 00829-67 EWT(m)/EWP(j)/T IJP(c) WW/JAJ/RM

ACC NR: AF6027769 (A) SOURCE CODE: UR/0190/66/008/008/1365/1367

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Yegorova, Yu. V.; Gumar-galiyeva, K. Z.; Belavtseva, Ye. N.

ORG: Institute of Organoelemental Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Electron-microscope investigation of pemosores

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 8, 1966, 1365-1367

TOPIC TAGS: monomer, graft copolymer, pemosore

ABSTRACT: The structure of multigraft copolymer pemosores was studied. The analysis of grafted films of polyethyleneterephthalate and poly-ε-caproamide with different vinyl monomers was done using carbon-platinum replicas in the UEMV-1000 electron microscope. The graft changes the morphology of the surface structure considerably, whereupon the changes grow with the increase of quantity of the grafted monomer. A difference in the character of grafting was also found in the case of polyethylene-terephthalate and poly-ε-caproamide with different grafted monomers.

38
37
B

Card 1/2

UDC: 678.01:53

L 00829-67

ACC NR: AP6027769

The author thanks D. Ya. Tsvankin for taking x-ray photographs of
pemosor samples. Orig. art. has: 8 figures. [Based on authors'
abstract]

[NF]

SUB CODE: 07/ SUBM DATE: 30Jun65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

L 01265-67 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6003493

(A)

SOURCE CODE: UR/0020/66/166/001/0118/0121

AUTHOR: Lokshin, B. V.; Mozgova, K. K.; Korshak, V. V. (Corresponding member AN SSSR);
Yegorova, Yu. V. 51
B

ORG: Institute of Elementoorganic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Graft copolymers. Mechanism of grafting polyethyleneterephthalate (Lavsan) B

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 118-121

TOPIC TAGS: graft copolymer, thermal decomposition, *polyethylene terephthalate*

ABSTRACT: The mechanism of grafting of polymers is discussed. It is concluded that the thermal activation of the process of grafting of a Lavsan film is related to its thermooxidational destruction. Heating of a Lavsan film at 110C for 6 min caused the appearance of new infrared absorption bands at 670, 720, 810, 920, 1620, and 1840 cm⁻¹. These changes were due to the formation of hydroxyperoxide, anhydride, and vinyl groups in the process of the thermooxidational destruction. Orig. art. has: 2 fig.

SUB CODE: 07/ SUBM DATE: 20Apr65/ ORIG REF: 005/ OTH REF: 005

Card 1/1 awm

UDC: 541.64