MOKRUSHIN, S.G.; MILYUTINA, M.I.

Experimental study of laminary systems. XX. The spontaneous formation of unimicellar layers of colloidal ferric hydroxide on the surface of colloidal solutions. Kolloid. Zhur. 15, 212-15 '53. (MLRA 6:5)
(CA 47 no.18:9105 '53)

1. Ural Polytech. Inst., Sverdlovsk.

MILYUTINA, M.I.

Experimental study of laminary systems. XX. The spontaneous formation of unimicellar layers of colloidal ferric hydroxide on the surface of colloidal solutions. S. G. Mokrushin and M. I. Milyutina. *Colloid J. U.S.S.R.* 15, 217–20(1953)(Engl. translation). See *C.A.* 47, 9105*b*.

H. L. H.

MILYUTINA, M.I.

587

AUTHORS: Demenev, N. V., Milyutina, M.I., Sharova, A. K. and Shtin, A.P.

TITLE: Preparation of an Acid Sulphate of Trivalent Titanium. (O poluchenii kisloy sernokisloy soli trekhvalentnogo titana).

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistr Vol.II, No.2, pp.465-467 (U.S.S.R.) 1957.

ABSTRACT: The formation of a violet-coloured crystalline precipitate in quantities strongly dependent on sulphuric-acid concentration was observed when working with reduced acid solutions of titanium. To determine the composition of the precipitate and elucidate the conditions leading to its formation was the object of the work described. The solutions used contained either 15.25, 25.0 or 37.5 g/litre of TiO_2 initially, and the final contents of this and of sulphuric acid were determined. The results are tabulated and indicate that with 700 - 100 g/litre of H_2SO_4 precipitation occurs to 90-97%. Analysis of the salt prepared with careful exclusion of oxidation gave the composition $Ti_2(SO_4).H_2SO_4.8H_2O$ It is a crystalline powder soluble in water, dilute sulphuric and hydrochloric and concentrated sulphuric acids. It is recommended as a source of trivalent titanium for analytical work. There are three references, one of which is Russian. 1 Table.

Received April 26, 1956.

Card 1/1

MILYUTINA, M.I.; SHTIN, A.P.; SHAROVA, A.K.

Studying the interaction of trivalent titanium sulfate with sulfuric acid. Titan i ego splavy no.5:301-396 '61. (MIRA 15:2)
(Titanium--Metallurgy)

S/828/62/000/000/010/017
E039/E420

AUTHORS: Sharova, A.K., Demenev, N.V., Polyakova, V.M., Milyutina, M.I.

TITLE: The physico-chemical basis of methods of separating titanium and the earth acids

SOURCE: Razdeleniye blizkikh po svoystvam redkikh metallov. Mezhvuz. konfer. po metodam razdel. blizkikh po svoyst. red. metallov. Moscow, Metallurgizdat, 1962, 116-123

TEXT: This work was undertaken because the properties of the fluoride complexes of Ti and Nb and their solubilities in various mineral acids are of importance in the development of separation processes. It is shown that the optimum conditions for the separation of Ti and Nb from H_2SO_4 solution are: 10% H_2SO_4, 1% HF and 10% KCl. From a study of the interaction of potassium salts with Te and Nb in H_2SO_4 a method is developed for separating these elements from medium and strong acid solutions. This separation depends on the principal valency change in Ti. When a potassium salt is introduced in H_2SO_4 solution containing Ti (180 to 250 g/litre H_2SO_4) the double sulphate of Ti and K is

Card 1/2

precipitated. When Ti and Nb are present in solution both metals are precipitated in the form of isomorphous compounds. However, if Ti is present in the trivalent form, it is not precipitated and the Nb is separated from it in the precipitate in the form: $K_2SO_4(NbO)_2(SO_4)_3 \cdot 4H_2O$. Data are obtained on the solubilities of Nb and Ti in the TiO_2-SO_3-H_2O system over a wide range of H_2SO_4 concentrations (180 to 1000 g/litre) and the conditions for their separation found. The separation of Nb and Ti is attained by the successive fractional precipitation of Ti in the form $Ti_2(SO_4)_3 \cdot H_2SO_4 \cdot 8H_2O$ and then the niobium sulphate complex $(NH_4)_8[Nb_6O_3(SO_4)_{12}] \cdot 21H_2O$ with an acidity of 800 to 900 g/litre H_2SO_4. The product of this process contains 98.26 to 98.8% Nb_2O_5 and 0.3 to 0.5% TiO_2. As a result of this investigation the above methods are recommended for the separation of Nb and Ti. There are 2 figures and 2 tables.

Card 2/2

L 52373-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 LJP(c) JD/JG

ACCESSION NR: AP5009949 UR/0078/65/010/004/0883/0888

AUTHOR: Milyutina, M. I.; Sharova, A. K.; Titova, Z. M.

TITLE: Niobium arsenate

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 4, 1965, 883-888

TOPIC TAGS: niobium compound, inorganic synthesis, arsenic compound, chemical reaction, precipitation, thermal analysis

ABSTRACT: The precipitation of niobium arsenate from sulfuric acid solutions was studied. Niobium arsenate was precipitated with sodium arsenate. The amount of niobium arsenate, precipitate, its composition and properties were also studied. The data on the precipitation of niobium with sodium arsenate are shown in fig. 1 of the Enclosure. It is found that the optimum conditions for the precipitation of niobium arsenate are: 150-300 g/l of sulfuric acid; about 4% of $Na_2HAsO_4 \cdot 7H_2O$ solution; $As_2O_5:Nb_2O_5 = (10-20):1$; aging of precipitate for 20 hrs. Niobium arsenates are formed by reaction of sodium arsenate with niobium in sulfuric acid as follows:

$$(NbO_2)_2SO_4 + Na_2HAsO_4 = (NbO_2)_2HAsO_4 + Na_2SO_4$$

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L 52373-65

ACCESSION NR: AP5009949

Thermal and chemical analysis of the arsenates and intermediate dehydration products showed the following compounds: $2Nb_2O_5 \cdot As_2O_5 \cdot 7H_2O$, $2Nb_2O_5 \cdot As_2O_5 \cdot H_2O$ and $2Nb_2O_5 \cdot As_2O_5$. The existence of a large number of x-ray diffraction lines indicates the crystalline nature of $2Nb_2O_5 \cdot As_2O_5$ or $(NbO_2)_4As_2O_7$. The remaining niobium arsenate hydrates are amorphous. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 27Nov63 ENCL: 01 SUB CODE: IC, GC

NO REF SOV: 009 OTHER: 002

Card 2/3

L 52373-65

ACCESSION NR: AP5009949 ENCLOSURE: 01

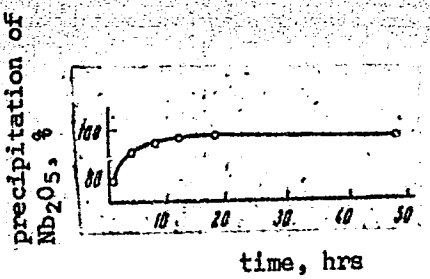

Fig. 1. Precipitation of niobium from sulfuric acid solutions as a function of aging time. The solution contains 210 g/ℓ H_2SO_4, $5.43 \cdot 10^{-3}$ mol/ℓ Nb_2O_5. Precipitation with $Na_2HAsO_4 \cdot 7H_2O$.

Card 3/3

ACCESSION NR: AT4042097 S/2768/63/000/007/0079/0083

AUTHOR: Sharova, A.K.; Milyutina, M.I.

TITLE: Separation of niobium and titanium (III) in sulfuric acid solutions.

SOURCE: AN SSSR. Ural'skiy filial. Institut khimii. Trudy*, no. 7, 1963. Khimiya i ekhnologiya redkikh metallov (Chemistry and technology of rare metals), 79-83.

TOPIC TAGS: niobium, titanium, niobium purification, titanium purification, electrolytic reduction, titanium reduction

ABSTRACT: The authors investigated the possibility of separating titanium (III) from niobium (V) in strong sulfuric acid solutions on the basis of the increase in formation of an insoluble titanium (III) compound with increasing concentration of the acid. A curve showing the yield of precipitate versus acid concentration is shown in the Enclosure. Analysis of the precipitate identified it as $Ti_2(SO_4)_3 \cdot H_2SO_4 \cdot 8H_2O$. Solutions of 600 — 900 g/L H_2SO_4 containing TiO_2 and Nb_2O_5 in proportions of 6:1, 4:1, 2:1, and 1:1 were then used in experiments in which the TiO_2 was precipitated in the above form by electrolytic reduction, while the niobium remained in the solution. The process is illustrated by diagrams. Orig. art. has: 6 figures and 1 table.

Card 1/3

ACCESSION NR: AT4042097

ASSOCIATION: Institut khimii, Ural'skiy filial AN SSSR (Chemical Institute, Ural. Branch, AN SSSR)

SUBMITTED: 00 ENCL: 01

SUB CODE: IC NO REF SOV: 007 OTHER: 000

Card 2/3

ACCESSION NR: AT4042097

ENCLOSURE: 01

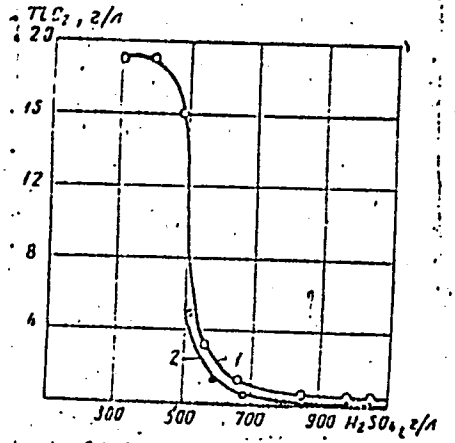

Fig. 1. Decrease in the content of trivalent Ti in solution (in g/L) in relation to sulfuric acid concentration (g/L). The TiO_2 content in the original solutions was 18.5 (1) and 39 (2) g/L.

Card 3/3

ACCESSION NR: AT4042098 S/2768/63/000/007/0085/0089

AUTHOR: Milyutina, M. I., Sharova, A. K.

TITLE: Fractional precipitation of titanium and niobium sulfates from solutions of sulfuric acid

SOURCE: AN SSSR. Ural'skiy filial. Institut khimii. Trudy*, no. 7, 1963. Khimiya i tekhnologiya redkikh metallov (Chemistry and technology of rare metals), 85-89

TOPIC TAGS: titanium, niobium, tantalum, titanium purification, niobium purification, fractional precipitation, metal sulfate fractionation

ABSTRACT: A solution containing 245 g/L H_2SO_4, 48 g/L TiO_2, 10.25 g/L Nb_2O_5, and 3.52 g/L Fe_2O_3 was used in a study of the successive precipitation of titanium and niobium in the form of their low-valence sulfates. Titanium reduced electrolytically to Ti^{+3}, was precipitated (as $Ti_2(SO_4)_3 \cdot H_2SO_4 \cdot 8H_2O$) by adding sulfuric acid to the solution to a concentration of 800-900 g/L. The Nb^{+3} and Nb^{+5} remaining in the solution was then precipitated in the form of ammonium sulfate-niobiate, $(NH_4)_8 [(Nb_6O_3) (SO_4)_{12}] \cdot 21H_2O$,

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ACCESSION NR: AT4042098

by adding ammonium sulfate to the solution to a concentration of 7.5%. 98-99% pure Nb_2O_5 with less than 0.5% TiO_2 was then obtained from the precipitate in yields of up to 71.5% by oxidation, conversion into hydrates, drying and calcining. Tantalum is not precipitated by the procedure. "The analyses were carried out by Lab. Asst. G. V. Milovidova." Orig. art. has: 4 tables.

ASSOCIATION: Institute khimii, Ural'skiy filial AN SSSR (Chemical Institute, Urals Branch of the AN SSSR)

SUBMITTED: 00 ENCL: 00

SUB CODE: IC, MM NO REF SOV: 007 OTHER: 001

2/2
Card

MILYUTINA, N.A.

137-58-5-9317

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 75 (USSR)

AUTHORS: Tarabayev, S.I., Budon, V.D., Matveyeva, K.T., Milyutina, N.A.

TITLE: Direct Leaching of Lead From Sulfide Concentrates (Neposredstvennoye vyshchelachivaniye svintsa iz sul'fidnykh kontsentratov)

PERIODICAL: Izv. AN KazSSR. Ser. gorn. dela, metallurgii, str-va i stroymaterialov, 1957, Nr 4 (15), pp 59-65

ABSTRACT: The process of direct and selective leaching of lead from sulfidic polymetallic concentrates by means of acidic chloride solutions was studied under laboratory conditions as well as on a larger laboratory scale. Optimal leaching conditions for extraction of up to 97-98% of Pb are shown. Along with Pb, Cd (96% of it) and Ag also pass into the solution. Cu, Au, and Bi remain entirely in the cakes. The behavior of Zn depends on the nature of the initial raw material and on the conditions of leaching.

G.S.

Card 1/1 1. Lead--Production 2. Lead ores--Processing 3. Chloride solutions--Applications

SOV/137-58-9-18793

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 91 (USSR)

AUTHORS: Tarabayev, S.I., Milyutina, N.A., Budon, V.D., Dostanova, Z.Kh.

TITLE: Precipitation of Lead From Chloride Solutions. Communication II. (Osazhdeniye svintsa iz khloridnykh rastvorov. Soobshcheniye II)

PERIODICAL: Izv. AN KazSSR. Ser. gorn. dela, metallurgii, str-va i stroymaterialov, 1957, Nr 5 (16), pp 30-36

ABSTRACT: An examination is made of methods of precipitating Pb from chloride solutions. Experiments were run on the crystallization of $PbCl_2$ by chloride solutions during the cooling of solutions resulting from the leaching of Dzhezkazgan concentrates. The resultant $PbCl_2$ was smelted with mineral coal and $CaCO_3$ at 800-900°C to free the metal. Extraction of Pb in ingot form came to 93.52%. It is established that the method of crystallizing $PbCl_2$ with subsequent smelting of the metal from the $PbCl_2$ in the presence of C and $CaCO_3$ makes it possible to obtain metal of adequate purity without prior cleaning of the solutions. The tendency of the solutions to become "exhausted" after Pb

Card 1/2

SOV/137-58-9-18793

Precipitation of Lead From Chloride Solutions. Communication II.

precipitation when they are used as return solvents is verified. For Communication I, see RZhMet, 1958, Nr 5, 9317.

N.P.

1. Lead chlorides--Processing 2. Lead--Separation

Card 2/2

MILYUTINA, N. A.: Master Tech Sci (diss) -- "The problem of hydrolysis of the chlorides of heavy nonferrous metals". Alma-Ata, 1958. 12 pp (Acad Sci Kazakh SSR, Inst of Metallurgy and Ore Dressing), 150 copies (KL, No 4, 1959, 127)

TARABAYEV, S.I.; MILYUTINA, N.A.

Settling, filtration, and washing of sinter cake following the leaching of concentrates in chloride solutions. Izv.AN Kazakh.SSR.Ser.met.,obog.i ogneup. no.2:26-31 '58.
(MIRA 16:2)
(Hydrometallurgy)

MILYUTINA, N.A.; TARABAYEV, S.I.

Hydrolysis of heavy nonferrous metal chlorides. Izv.AN Kazakh. SSR.Ser.met., obog.i ogneup. no.2:56-64 '58. (MIRA 16:2)
(Nonferrous metals--Metallurgy) (Hydrolysis)

MILYUTINA, N.A.; ISAKOVA, R.A.; TARABAYEV, S.I.

Method of determining the water of crystallization in crystal hydrates by the use of radioactive isotopes. Vest. AN Kazakh. SSR 14 no.3:84-89 Mr '58. (MIRA 11:5)
(Crystallization, Water of) (Radioactive tracers)
(Hydrates--Analysis)

PHASE I BOOK EXPLOITATION SOV/2094

18(5,6,3)

Akademiya nauk Kazakhskoy SSR. Institut metallurgii i obogashcheniya

Trudy, t. 1 (Transactions of the Institute of Metallurgy and Ore Dressing, Kazakh SSR Academy of Sciences, Vol 1) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 159 p. 1,225 copies printed.

Ed.: Yu. N. Rumyantsev; Tech. Ed.: Z.P. Barskina;
Editorial Board: V.D. Pomomarev (Resp. Ed.), B.N. Laskorin, G.I. Chufarov, B.A. Isakova, I.K. Polyvyannyy, A.S. Grigorovich, L.P. Il', and Ye. I. Ponomareva.
(Resp. Secretary), and Ye. I. Ponomareva.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This is a collection of articles dealing with various aspects of process metallurgy, principally nonferrous, and with related matters such as treatment of ore concentrates. Topics discussed include preparation of slags, etc. Topics discussed include preparation of slags, extraction of arsenic, sublimation of copper from smelting dust, recovery of rare metals from smelting dust, from sphalite, precipitation of lead and zinc, and drying of electrolytic precipitates. Three articles are concerned with lead-zinc concentrates. The articles are accompanied by Soviet the metal, Russian. and non-Soviet references.

Table of Contents:

Card 3/5

N. A. MILLIT INA

MILYUTINA, N.A.

Observations on Teredo navalis during its setting and the initial period of boring into wood [with summary in English]. Zool. zhur. 38 no.4:520-536 Ap '59. (MIRA 12:5)

1.Chair of Invertebrate Zoology, Biological-Pedological Faculty, Moscow State University.
(Shipworms)

S/137/62/000/002/035/144
A006/A101

AUTHORS: Polyvyanskiy, I. R., Milyutina, N. A.

TITLE: Tellurium concentration and extraction of silver and lead from cupel dusts

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 25, abstract 2G192 ("Izv. AN KazSSR, Ser. metallurgii, obogashcheniya i ogneuporov", 1961, no. 2, 10-17, Kaz. summary)

TEXT: Results are given on laboratory experiments on the melting of cupellation dusts with Na_2SO_4 and C, in graphite crucibles and an electric furnace. Optimum conditions are: 1,000°C; holding time - 20 min; Na_2SO_4 amount - 15 to 20% of the dust weight; carbon 4 - 5%. The degree of extraction (in %) is: into the alloy - Pb 98.5, Ag 99.5; into the thiosalt melt - Te 98; Zn 94; Se 90.

A. Tseydler

[Abstracter's note: Complete translation]

Card 1/1

TSEFT, A.L.; MILYUTINA, N.A.; VASIL'YEVA, V.A.

Leaching of mixed Dzhezkazgan ores by chloride solutions. Izv. AN Kazakh.SSR.Ser.met., obog.i ogneup. no.2:64-72 '61. (MIRA 14:8)

(Dzhezkazgan--Copper ores) (Leaching)

TSEFT, A.L.; VASIL'YEVA, V.A.; MILYUTINA, N.A.

Leaching of mixed Dzhezkazgan ores by solutions of sulfuric acid containing salts of trivalent iron. Report no.2. Izv.AN Kazakh. SSR.Ser.met., obog.i ogneup. no.2:73-84 '61. (MIRA 14:8)
(Dzhezkazgan—Copper ores) (Leaching)

S/817/62/005/000/003/012
A006/A101

AUTHORS: Polyvyannyy, I. R., Milyutina, N. A.

TITLE: Joint processing of tellurium-containing products of the lead industry

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut metallurgii i obogashcheniya. Trudy. v. 5, 1962, Tsvetnaya metallurgiya, 57 - 68

TEXT: Melting with sodium sulfate, and reduction melting with soda slags (sodium antimonate melt slags) were the two methods used in the joint processing of tellurium-containing products for the purpose of extracting lead, precious metals and antimony into the crude lead, and tellurium into the matte-slag melt, with subsequent hydrometallurgical processing of the latter. The object of the experiments was: determining the effect of temperature and duration of melting upon tellurium concentration in the matte-slag melt, and upon the yield of lead, silver and antimony into the crude metal; determining the tellurium concentration in the melt and the extraction of lead, silver and antimony into the crude metal, depending upon the charge composition, and analyzing the joint melting of

S/817/62/005/000/003/012
A006/A101

Joint processing of...

cupellation dust, antimonous slag and reguline lead. It was found that the most efficient method for the joint processing of the above-mentioned materials was reduction melting to sodium slag. The optimum conditions are: 1,050°C; time of holding the melt at this temperature: 20 min; optimum composition of the charge: 60% antimonate melt slag; 50% reguline lead and 5% carbon (of the dust weight). The products of melting cuppelation dust with antimonate slag are analyzed and show that tellurium can be fully extracted into the sodium slag melt, and lead, silver and antimony into the crude metal. The melting process yields two products: 1) crude lead in which are concentrated 97.4 - 99% lead, 95.5 - 100% silver and 97.6 - 98.9% antimony; 2) alkaline melt: tellurium extraction is 99.3 - 99.9%, the matte-slag melt contains up to 1.34% tellurium. An amount of 0.05 to 0.001% tellurium remains in the crude lead. There are 3 figures and 8 tables.

Card 2/2

POLYVYANNYY, I.R.; MILYUTINA, N.A.

Hydrometallurgical processing of fused sodium matte from sodium sulfate smelting of cupellation dusts. Trudy Inst. met. i obog. AN Kazakh. SSR 6:64-71 '63.

Treatment of alkali melts obtained in the smelting of tellurium-bearing materials. Trudy Inst. met. i obog. AN Kazakh. SSR 6:72-76 '63. (MIRA 16:10)

POLYVYANNYY, I.K.; DERKIENKO, R.S.; MILYUTINA, N.A.

Investigating the aqueous leaching of tungsten-molybdenum containing molten sodium matte. Trudy Inst. met. i obog. AN Kazakh. SSR 12:154-160 '65. (MIRA 18:10)

POLIVYANNYY, I.R.; MILYUTINA, N.A.; SYSOYEV, L.N.

Separating tungsten and molybdenum in alkali sulfide solutions.
Trudy Inst. met. i obog. AN Kazakh. SSR 12:161-167 '65.
(MIRA 18:10)

MILYUTIN A. I.

Solvent for zinc sulfate. Khim.volok no.6:68 '63. (MIRA 17:1)

1. Krasnoyarskiy zavod.

VOLKOVA, Ye.A.; MILYUTINA, N.P.

Investigating the graduated circle of goniometers. Trudy VNIIM no.16:42-49 '51. (MIRA 11:6)

(Goniometers)

DRABKIN, A. Ye.; MILYUTINA, N. V.

Removal of hydrogen sulfide of iron hydoxide suspensions from shale gas. Trudy VNIIT no. 11:269-276 '62. (MIRA 17:5)

ANDZHAPARIDZE, O.G.; ZUBOVA, Z.F.; GORDIYENKO, N.M.; MILYUTINA, R.I.

Obtaining immune serums against epidemic encephalitis. Vop.virus. 2 no.4:248-251 Jl-Ag '57. (MIRA 10:12)
(ENCEPHALITIS, EPIDEMIC, immunology,
Russian-tick borne, prod. of immune sera (Rus))

1. ODINTSOV, P. N. : MILYUTINA, S. V.

2. USSR (600)

4. Wood - Chemistry

7. Swelling of cellular walls of spruce wood in sulfuric acid and in acid sol tions of glucose. Larv. PSR Zin. Akad. Vestis no. 9. 1950

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

MILUTINA, S.V.

Swelling of fir-wood substance and lignin in sulfuric acid, water, and organic solvents. P. N. Obolenskiy and S. V. Milutina (Inst. Forest. Econ. Problems, Acad. Sci. Latvian [illegible]). *Latvijas PSR Zinatnu Akad. Vestis* 1952, No. 7 (Whole No. 60), 87-94 (in Russian).

No. 7 (Whole No. 60), 67-94(in Russian).—The addn. of 6–19% glucose to 64–75% sulfuric acid decreased the swelling of fir-wood substance in acid several times. This is explained by the osmotic-pressure relations as well as by a partial tie-up of the acid by the sugar. Vol. increase of lignin upon swelling was (in %): water 45, acetone 65, EtOH 55, Et_2O 35. Lignin swelled 122% in 55% sulfuric acid, and similarly at higher acid concns., while the cellulose swelled appreciably only in the acid above the 55% concn. Swelling of the bulk wood depended primarily on the properties of the intercellular substance. The secondary layer swelled in the direction toward the center of the cells. The distribution of the carbohydrates and the lignin in the wood varied with direction. Lignin swelled less along the axis of the tracheids than normally to it, which is taken to indicate an orientation of the lignin mols. in the cell walls.

Andrew Dravnieks

MILYUTINA, V.

USSR / Cultivated Plants. Medicinal Plants. Essential H
Oil Plants. Toxic Plants.

AbsJour : Ref Zhur - Biol., No 34853

Authors : Kalnin'sh, A. I.; Rupays, E. A.; Milyutina, B. V.
Inst : AS LatvSSR
Title : Study of the Accrone Leaf of the Needles of Highly Resiniforous Pines

Orig Pub : Izv. AN LatvSSR, 1957, #3, 79-87

Abstract : By anatomical comparison methods, it was found that resin productivity of the common pine increases with the amount and size of the central and peripheral resin ducts in the accrose leaf. -- Sukhov.

Card 1/1

SERGEYEVA, V.N.; MILYUTINA, S.V.

Changes in the morphology and properties of the cell walls of holocellulose and cellulose fibers of spruce brought about by thermal processing. Gidroliz. i lesokhim. prom. 11 no.3:3-5 '58. (MIRA 11:5)

1. Institut lesokhozyaystvennykh problem AN Latviyskoy SSR.
(Spruce) (Holocellulose) (Cellulose)

23962
S/103/61/022/007/008/008
D252/D302

9,8300

AUTHORS: Lyubinskiy, I.A., Milyutina, V.A. and Pozin, N.V. (Moscow)

TITLE: Pulse-frequency telemetering transmitter

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 7, 1961, 934-938

TEXT: The pulse-frequency telemetering device ChTI-1 is designed for measuring small d.c. voltages. It produces rectangular pulses of duty ratio 2, which are proportional to the measured voltage. Noiseproof telemetering channels require a narrowing of the frequency range; hence the frequency range of the pulse produced by the device was chosen from 5 to 15 cycles. The device uses transistors. Fig. 1 shows a block-diagram of the device: low-frequency filter 1, d.c. amplifier 2 which contains a modulator-converter of d.c. into a.c., an a.c. amplifier and a rectifier, pulse-generator 3, and unit 4 for retransforming frequency into voltage. The transmission factor for the closed system is approximately $1/\beta$ for large values of

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Pulse-frequency telemetering...

$k\beta$ (k being the transmission factor of the direct channel, and of the feedback channel). The placing of the filter in the direct channel permits (due to the absence of lag elements in the feedback channel) considerably simplifying the amplifier circuit by excluding the phase-sensitive stage. For comparison, the expressions for the transfer function are given: a) filter in direct channel

$$k'(p) = \frac{k_1(p)k_2k_3}{1 + k_1(p)k_2k_3\beta} = k_2k_3 \frac{1}{ap^2 + bp + c + k_2k_3\beta};$$

b) filter in feedback channel

$$k''(p) = \frac{k_2k_3}{1 + k_1(p)k_2k_3\beta} = k_2k_3 \left(1 - \frac{k_2k_3}{ap^2 + bp + c + k_2k_3\beta}\right).$$

here $k_1(p) = \frac{1}{ap^2 + bp + c}$ is the transfer function of the RC-filter, k_2 - the amplification factor of the amplifier, k_3 - the voltage-into-frequency transformation factor. The transient functions for a) and b) are respectively

Card 2/5

Pulse-frequency telemetering...

$$h'(t) = \frac{k_2k_3}{c + k_2k_3\beta}\left(1 - \frac{p_1e^{-p_2t} - p_2e^{-p_1t}}{p_1 - p_2}\right),$$

$$h''(t) = k_2k_3\left(\frac{c}{c + k_2k_3\beta} + \frac{p_1e^{-p_2t} - p_2e^{-p_1t}}{p_1 - p_2}\right).$$

where p_1 and p_2 are the roots of $ap^2 + bp + c + k_2k_3\beta = 0$. From the relationships for a two-link RC-filter it follows that for stable operation of the circuit it is necessary that the time-constant of the first link should be much larger than that of the second link. The device incorporates a torque-balance technique. One of the advantages of the chosen circuit is the possibility of considerably increasing the input resistance of the device, and that is due to the compensation of the input signal by the feedback voltage, in the circuit of the measured voltage. A new type of magnetic modulator M (with transverse excitation) is used. Its transmission factor is approximately 0.8 - 0.9 and does not depend on the voltage and frequency variations of the supply source and on the temperature

Card 3/5

Pulse-frequency telemetering...

of the surroundings over a wide range. The modulator is practically inertia-free. The a.c. amplifier consists of triodes of type P13B and P14 (triodes P_1,P_2,P_3,P_4). P_5 is a blocking generator. The device was laboratory-tested, and has the following main characteristics: pickup-voltage range: 25 milliv., input resistance of the order of 50 k , stabilization time of frequency: 0.5 sec, size: 255 x 215 x 140 mm. Owing to the new type of magnetic modulator, the design was considerably simplified compared with previous devices (ChIS-D-1 or ChIC-D-2). The high-ohmic input results in greatly increased sensitivity (10^{-8}v) as stated in A.M. Pshenichnikov (Ref. 4: Staticheskoye peredayushchee ustroystvo chastotno-impuls'snoy sistemy teleizmereniya, Avtomatika i telemekhanika, v. 18, no. 5, 1957). The device can be used for transmitting readings from a wide variety of d.c. pickups with small output strength, including thermoelement pickups, and pickups with bridge circuits, e.g. gas-analyzers for telemetering the methane concentration in mines. There are 4 figures and 4 Soviet-bloc references.

SUBMITTED: December 29, 1960

Card 4/5

Milyutina, Ye. I

MILYUTINA, Ye.I.

Measures for decreasing the incidence of tonsillitis in Sverdlovsk. Zdrav.Ros.Feder. 2 no.1:20-24 Ja '58. (MIRA 11:2)

1. Zavedujuyushchaya Sverdlovskim gorodskim otdelom zdravookhraneniya.
(SVERDLOVSK--TONSILS--DISEASES)

MILYUTINA, Ye.I.

Sverdlovsk conference of physicians serving medical districts.
Zdrav.Ros.Feder. 2 no.3:43-45 Mr '58. (MIRA 11:3)
(SVERDLOVSK--PUBLIC HEALTH)

MILYUTINA, Ye.I.; NOSKOVA, G.N.

Analysis of visits to medical institutions by workers of industrial enterprises. Zdrav. Ros. Feder. 4 no. 4:24-26 Ap '60.
(MIRA 13:10)

1. Iz Sverdlovskogo gorzdravotdela.
(SVERDLOVSK—DISEASES—REPORTING)

BAGARYATSKIY, B.A.; FEL'DSHTEYN, Ya.I.; LEBEDINSKIY, A.I., doktor fiz.-matem. nauk, otv. red.; MILYUTINA, Ye.N., red.

[Collection of articles] Sbornik statei. Moskva, Nauka. No.12. 1965. 56 p. (MIRA 18:4)

1. Akademiya nauk SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. IV razdel programmy MGG. Polyarnyye siyaniya.

MILYUTINA, YE. V.

33546

Osobennosti Klinicheskikh Kartin V Zavisimosti Ot Urovnya Raneniya Perifericheskikh Nervov. Trudy Kurskogo Gos. Med. In-Ta, T.11, Vyp. 2, 1948, c. 161-66

SO: Letopis' Zhurnal'nykh Statey, Vol 45, Maskva, 1949

MILYUTINA, Ye. V.

"Early Semiotics and the Development of Clinical Phenomena in Multiple Sclerosis." Sub 16 Jan 51, Central Inst. for the Advanced Training of Physicians.

Cand. Med. Sci

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

MILYUTINA, Ye.V., assistent

Etiological kinship of multiple sclerosis and acute disseminated encephalomyelitis on the basis of experimental data. Sbor. trud. Kursk. gos. med. inst. no.13:249-253 '58. (MIRA 14:3)

1. Iz Instituta virusologii AMN SSSR (zav. laboratoriyey - prof. A.K.Shubladze) i kliniki nervnykh bolezney Kurskogo gosudarstvennogo meditsinskogo instituta (zav. - professor N.I.Golik).
(MULTIPLE SCLEROSIS) (ENCEPHALOMYELITIS)

MILYUTINA, Ye.V., assistent

Clinical picture of the initial period during the acute course of multiple sclerosis. Sbor. trud. Kursk. gos. med. inst. no.13:254-257 '58. (MIRA 14:3)

1. Iz kliniki nervnykh bolezney (zav. - prof. N.I.Golik) Kurskogo gosudarstvennogo meditsinskogo instituta.
(MULTIPLE SCLEROSIS)

GOLIK, N.I.; MILYUTINA, Ye.V.

Some results of clinical and pathomorphological study of multiple sclerosis and acute encephalomyelitis. Vest. AMN SSSR 16 no.6: 35-45 '61. (MIRA 15:1)

1. Kurskiy meditsinskiy institut.
(MULTIPLE SCLEROSIS) (ENCEPHALOMYELITIS)

GOLIK, Nikolay Ivanovich; MILYUTINA, Yevgeniya Vasil'yevna; GOTOVTSEV, P.I., red.; PETROVA, N.K., tekhn. red.

[Multiple sclerosis and acute disseminated encephalomyelitis] Mnozhestvennyi skleroz i ostrye diseminirovannye entsefalomielity. Moskva, Medgiz, 1962. 113 p. (MIRA 15:12)
(MULTIPLE SCLEROSIS) (ENCEPHALOMYELITIS)

MILYUTINA, Ye.Ya.; SIMKHOVICH, Ye.I.; DIMAND, S.V.

Results of malaria an d helminth infections control in the Moldavian S.S.R. Med.paraz. i paraz.bol. 26 no.5:588-592 S-O '57. (MIRA 11:2)

1. Iz Respublikanskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach A.Kovalev)

(MALARIA, prev. & control in Moldavian Russia (Rus))
(HELMINTH INFECTIONS, prev. & control same)

MILYUTINSKAYA, R. I.

U.S.S.R.

Decomposition of benzoyl peroxide in different solvents. Kh. S. Bagdasar'yan and R. I. Milyutinskaya (L. Ya. Karpov Phys.-Chem. Inst. [illegible] Akim 27, 420-32(1951).—In the absence of atm. O_2, at 20-75° Bz_2O_2 decomposes at the same rate in C_6H_6, AcOEt, and AcOH when the concn. is 0.00185 mole/l.; at a concn. of 0.185 mol./l., it decomposes 7 times as fast in AcOEt, and 4 times as fast in AcOH as in C_6H_6. In acetone the rate of decompn. is twice that in C_6H_6, and in CCl_4, Ph_2CH_2, dibutyl phthalate, and pseudocumene about the same as in C_6H_6. With decreasing concn. of Bz_2O_2 in C_6H_6 the yield of BzOH decreases. In AcOEt such a relation does not hold for either CO_2 or BzOH. At a concn. of 0.185 mole/l. in Ph_2CH_2 the yield of BzOH is twice that in C_6H_6; in dibutyl phthalate 1.4 times; in pseudocumene 3 times; in acetone twice; and in AcOH 5 times. The yield of CO_2 in dibutyl phthalate is the same as that in C_6H_6; in CCl_4, $^1/_4$ more; in Ph_2CH_2, $^1/_3$ less; in acetone, $^1/_6$ less; and in AcOH and AcOEt, $^1/_3$ less. Decompn. in the presence of vinyl compds. i.e., C_6H_6 at 75° results in a decreased yield of BzOH and CO_2. These reactions are attributed to a chain decompn. of Bz_2O_2. There are 3 types of decompn.: unimol. decompn. of peroxide into benzoate radicals, and interaction of peroxide with mol. reacting components.

Jack Weiner

MILYUTINSKAYA, R. I.
USSR/Chemistry

Card 1/2

Authors : Bagdasaryan, Kh. S., and Milyutinskaya, R. I.

Title : Photochemical Reactions of carbon tetrachloride with vinyl compounds

Periodical : Zhur. Fiz. Khim. 28, Ed. 3, 498-506, March 1954

Abstract : The exposure of carbon tetrachloride mixtures to the effect of vinyl compounds leads to a more or less considerable increase in the rate of polymerization or the formation of carbon tetrachloride addition products with double bond. Typical is the behavior of styrene and vinyl butyl ether. Styrene dissolved in carbon tetrachloride polymerizes much faster than in an inert solvent. The molecular weight of polymers decreases simultaneously, Styrene is a photoactive component; the increase in the rate of polymerization is caused by the increase in the rate of formation of primary radicals. Vinylbutyl ether mixed with carbon tetrachloride forms an addition product with composition ratio of 1 : 1. The rate of reaction is proportional to the first degree of light intensity, the thermal

Zhur. Fiz. Khim. 28, No. 3, 498-506, March 1954

Card 2/2

Abstract : coefficient is close to one. It is a chain reaction. The quantum yield increases during the reduction in the ether concentration and reaches several thousands in diluted solutions. Hexachloroethane chloroform, and allyl chloride also accelerate the photo-polymerization of vinyl compounds but to a much lesser degree than carbon tetrachloride. Seven USSR references. Table, graphs.

Institution : The L. Ya. Karpov Physico-Chemical Institute, Moscow, USSR.

Submitted : June 19, 1953

MILYUTINSKAYA, R. I.

USSR/Chemistry

Card 1/1

Authors : Milyutinskaya, R. I., and Bagdasaryan, Kh. S.

Title : Study of the mechanism of radical reactions. Part 3. - Decomposition of benzoyl peroxide and its p, p'-dinitro- and p, p'-dimethoxy-derivatives in benzene and nitrobenzene.

Periodical : Zhur. Fiz. Khim., 28, Ed. 5, 797 - 800, May 1954

Abstract : The decomposition of benzoyl peroxide and its dinitro- and dimethoxy-derivatives in benzene and nitrobenzene was used as an example to prove the value of the polarity of molecules and free radicals for the process of radical reactions. The polarity of radicals may at times have a double effect on the rate of radical reactions. At distances up to the sum of the van der Waals radii, the opposite polarity of the reacting components should be favorable for the radical reaction by increasing the number of collisions. Seven references: 6-USSR; 1-USA. Table.

Institution : The L. Ya. Karpov Physico-Chemical Institute, Moscow.

Submitted : July 3, 1953

MILYUTINSKAYA, R. I., Cand Chem Sci -- (diss) "Radical Reactions of Benzoyl Peroxide in Solutions." Mos, 1957. 15 pp (Min of Chemical Industry USSR, Order of Labor Red Banner Sci Res Physicochemical Inst im L. Ya. Karpov), 110 copies (KL, 50-57, 118)

MILYUTINSKAYA, R. I.

Distr: 4E4j/4E3d

An investigation of the radical reactions mechanism. IV. The mechanism of biphenyl formation during the benzoyl peroxide and 4-nitrobenzoyl peroxide decomposition in benzene and nitrobenzene. R. I. Milyutinskaya, Kh. S. Bagdasar'yan, and E. A. Ershler (I. Ya. Karpov Phys. Chem. Inst., Moscow). *Zhur. Fiz. Khim.* 31, 1019–26(1957); cf.

?

Inst., Moscow). Zhur. Fiz. Khim. 32, 1149-50(1958).—Decompn. products of Bz_2O_2 were investigated in a deuterized C_6H_6-soln., and of $(4\text{-}O_2NC_6H_4CO)_2O_2$ in deuterized $PhNO_2$. The radicals in the peroxide decompn. as well as in the solvent decompn. were formed by the loss of an H (or D) atom, and the D content in the solvent permitted the identification of the sources of Ph_2 or $O_2NC_6H_4CO_2H$ formed. The D content in Ph_2 during the decompn. of Bz_2O_2 in deuteriobenzene was 45% of the D content in C_6H_6, and 48% in the resin formed 48%; these values were independent from either the temp. (75–100°) or the Bz_2O_2 concn. (between 0.02 and 0.12 mole). In the decompn. of $(4\text{-}O_2NC_6H_4CO)_2O_2$ in deuteriobenzene only $4\text{-}O_2NC_6H_4Ph$ contg. 52.5% D, was formed, while $O_2NC_6H_4CO_2H$ contained 10.5% D. When $(4\text{-}O_2NC_6H_4CO)_2O_2$ decomposed in nitrodeuteriobenzene, 42% D was found in the dinitrobiphenyl; the $O_2NC_6H_4CO_2H$ contained 10.3% D. The author draws the conclusion that biphenyls are formed by the addn. of a phenyl (or nitrophenyl) radical to the C_6H_6 (or $PhNO_2$) mol. with the formation of a PhC_6H_5· radical, and a subsequent breaking away of an H (or D) from the radical by the benzoyl (or nitrobenzoyl) radical. The reaction of breaking away of H (or D) occurs with no isotope effect.

W. M. Sternberg

AUTHORS: Milyutinskaya, R. I., Bagdasar'yan, Kh. S., Kopytovskiy, Yu. 76-32-2-29/38

TITLE: Investigation of the Mechanism of Radical Reactions (Issledovaniye mekhanizma radikal'nykh reaktsiy) V. Decay of 4-Nitrobenzoylperoxide in Toluene (V. Raspad perekisi 4-nitrobenzoila v toluole)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 2, pp. 428-432 (USSR).

ABSTRACT: Data were obtained in earlier works by the authors (reference 1) which prove the assumptions of rederence 3 concerning the scheme of the formation of diphenyl in the decomposition of nitrobenzoylperoxide and its substituents in aromatic solvents according to (1) and (2). The radical occuring in (1) and (2) can in a special case also be a benzoate radical. The there obtained result agrees with the mechanism of the formation of nitrobenzoic acid (according to reactions (1) and (2), where X denotes a nitrobenzoate radical) from reaction (3). In this connection the following problem appaers: can a nitrobenzoate radical dissolve out a movable hydrogen from the alkyl group belonging to the aro-

Card 1/3

matic ring? In order to solve this problem the authors investigated the decomposition of 4-nitrobenzoylperoxide in toluene partly deuterized in the methyl group, as well as in toluene partly deuterized in the ring. The results obtained showed without any doubt two ways for the formation of nitrobenzoic acid: the reaction (3) that is R = $NO_2C_6H_4$, R_1 = CH_3, and the reaction (4). Data are given by means of which the share of nitrobenzoic acid obtained by reaction (4) as well as the kinetic isotopic effect in this reaction can be determined. The equations (5) and (6) for the deuterium content in nitrobenzoic acid (obtained in the toluene deuterized in the ring or the methyl group) are given. From these the equation (7) for the isotopic effect is obtained. The values calculated according to this equation are within the limits of from 1,79 to 2,17. The isotopic effect in the reaction of the dissolving out of hydrogen from the toluene by the $NO_2C_6H_4COO$ radical (reaction (4)) is equal to 1,92

The share of the nitrobenzoate radicals which react according to reaction (3)-in the concentration of peroxide in the solution from 0,16 M and 100° - amounts to 0,365.

Card 2/3 The work was discussed with S. S. Medvedev.

Investigation of the Mechanism of Radical Reactions 76-32-2-29/38
V. Decay of 4-Nitrobenzoylperoxide in Toluene

There are 1 table, and 7 references, 2 of which are Soviet.

ASSOCIATION: Physico-chemical Institute imeni L. Ya. Karpov, Moscow
(Fiziko-khimicheskiy institut im. L. Ya. Karpova, Moskva)

SUBMITTED: December 12, 1956.

1. Nitro compounds--Decomposition 2. Benzoyl peroxide--Decomposition
3. Toluene--Chemical reactions

Card 3/3

68348

5.5500
5(4)

S/076/60/034/01/043/044
B004/B007

AUTHORS: Bagdasar'yan, Kh. S., Milyutinskaya, R. I.

TITLE: A New Method of Investigating the Reactivity of Organic Compounds to Radicals

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 1, pp 234 - 235 (USSR)

ABSTRACT: The authors describe a variant of the method of competitive reactions, which was worked out by themselves. It is based upon the application of tagged radicals and the determination of the reaction products by means of isotope dilution. Thus it is possible to use the tagged radicals in low concentration (0.01 ml/l), so that the reactions of these radicals may be neglected. The authors describe carrying-out of their method in the case of the reaction of the phenyl radical with aromatic compounds. A table gives the data for the reaction of benzoyl peroxide in a mixture of benzene + CCl_4, nitrobenzene + CCl_4, naphthalene + CCl_4, and cumene + CCl_4 at 100°.

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A New Method of Investigating the Reactivity of Organic Compounds to Radicals

S/076/60/034/01/043/044
B004/B007

The reaction constants found agree with the data obtained by employing other methods. At present the authors employ the method described for systematic investigations. There are 1 table and 3 references, 1 of which is Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova Moskva (Institute of Physical Chemistry imeni L. Ya. Karpov, Moscow)

SUBMITTED: June 18, 1959

3.7320
5.3830(A)

68856

AUTHORS: Milyutinskaya, R. I., Bagdasar'yan, Kh. S.

S/076/60/034/02/021/044
B010/B017

TITLE: Investigation of the Mechanism of Radical Reactions. VI. On the Reaction Mechanism of Benzoyl Peroxide With Amines

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 2, pp 405-412 (USSR)

ABSTRACT: S. P. Gambaryan (Refs 1,2) had already observed that amines react rapidly with benzoyl peroxide. O. A. Chaltykyan (Ref 4) and Horner (Ref 5) found that free radicals are formed in this connection. Since the reaction kinetics proper has been little investigated the authors tried in the present case, in continuation of previous investigations (Ref 7), to obtain a direct proof of the formation of free radicals in the reaction of benzoyl peroxide with secondary amines. The polymerization method and the reaction with diphenyl-picrylhydrazine were applied, and the kinetic isotope effect in the exchange of the hydrogen atoms in the amino group with deuterium was determined. N-deuterium aniline and N-deuterium diphenylamine were produced by shaking out with heavy water, α,α'-diphenyl-β-picrylhydrazine (DPPH·H) and the corresponding hydrazyl (DPPH) was produced by E. A. Mistryukov according to the method of Renn-Goldschmidt (Ref 8). The polymerization kinetics of methyl-

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Investigation of the Mechanism of Radical Reactions. VI. On the Reaction Mechanism of Benzoyl Peroxide With Amines

S/076/60/034/02/021/044
B010/B017

methacrylate[1] initiated by the benzoyl peroxide diphenylamine mixture was investigated according to the dilatometric method by Z. A. Sinitsyna. The value $k = 1.17 \cdot 10^{10} \exp(-16400/RT)$ l/mol sec. (1) was obtained for the bimolecular constant of the reaction with diphenylamine, and the value $k = 1.86 \cdot 10^{4} \exp(-10700/RT)$ l/mol sec. (4) with aniline. A comparison of the constant of the reaction rate (Tables 1,2) shows that the constant does not change in the exchange of protium with deuterium, i.e. no isotope effect takes place, and thus the transition of hydrogen from the amine to benzoyl peroxide does not influence the reaction rate. Kinetic experiments on the reaction of benzoyl peroxide with anilines substituted in the ring have also been carried out (Table 3). The constants of the Arrhenius equation for the benzoyl-peroxide reactions with amines are mentioned (Table 4), and the reactions are discussed from the point of view of the reaction theory of electron transition. The benzoyl-peroxide reaction with diphenylamine takes place clearly with the formation of free radicals which are capable of cleaving off the hydrogen atom from DPPH·H, and which effect a polymerization of methylmethacrylate. The efficacy of the benzoyl peroxide diphenylamine mixture in bringing about the polymerisation

Card 2/3

Investigation of the Mechanism of Radical Reactions. VI. On the Reaction Mechanism of Benzoyl Peroxide With Amines

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S/076/60/034/02/021/044
B010/B017

of methylmethacrylate was found to be about 0.001 at 25°. A paper by A. S. Kuz'minskiy and L. G. Angert is mentioned in the text. There are 4 figures, 4 tables, and 19 references, 9 of which are Soviet.

ASSOCIATION: Fizike-khimicheskiy institut im. L. Ya. Karpova Moskva (Institute of Physical Chemistry imeni L. Ya. Karpov, Moscow)

SUBMITTED: May 12, 1958

Card 3/3

BEMFORD, K.[Bamford, C.H.]; BARB, U.[Barb, W.G.]; DZHENKINS, A. [Jenkins, A.D.]; ON'ON, P.[Onyon, P.F.]; GRITSENKO, T.M., kand.khim. nauk, [translator]; MILYUTINSKAYA, R.I., kand. khim. nauk, [translator]; PRAVEDNIKOV, A.N., kand. khim. nauk [translator]; MALINSKIY, Yu.M., kand. khim. nauk, red.; KHODETSKAYA, Z.F., red.; PRIDANTSEVA, S.V., tekhn. red.

[Kinetics of vinyl polymerization by radical mechanisms] Kinetika radikal'noi polimerizatsii vinilovykh soedinenii. [By] C.H. Bamford i dr. Moskva, Izd-vo inostr. lit-ry, 1961. 345 p. Translated from the English. (MIRA 15:3)
(Vinyl compound polymers) (Radicals (Chemistry))

36520
S/081/62/000/006/017/117
B166/B101

AUTHORS: Bagdasar'yan, Kh. S., Milyutinskaya, R. I., Trosman, E. A., Borovkova, , V. A.

TITLE: Quantitative studies of radical reactivity by the competitive reaction method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 53, abstract 6B360 (Tr. po khimii i khim. tekhnol. Gor'kiy no. 1, 1961, 12 - 17)

TEXT: Using a method described earlier (RZhKhim, 1960, no. 24, 96341), measurements were made of the relative rates of attachment of phenyl radicals to aromatic rings (rate constant k_1) and of the separation rates of hydrogen from alkyl benzenes by phenyl radicals (constant k_2). Separation of chlorine from carbon tetrachloride was taken as the standard reaction (constant k_3). The following values of the constants were obtained at 100°C (the first figure is k_1/k_3, the second figure is k_2/k_3): benzene

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0.235; - ; nitrobenzene 1.0; 0.1; naphthalene 5; 0; toluene 0.48; 0.33; isopropyl benzene 0.98; 0.85; polystyrene 0.62; 0.06. The polar substitutes - the electron-donor and electron-acceptor-- activate the phenyl rings. There is no marked separation of hydrogen from the aromatic rings. The rate of hydrogen separation from the alkyl groups of polystyrene is considerably lower than it is from isopropyl benzene, which is apparently attributable to the steric factor. [Abstracter's note: Complete translation.]

L 19745-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 ASD(p)-3/RAEM(1) RM/MLK

ACCESSION NR: AT4049866 S/0000/64/000/000/0265/0271

AUTHOR: Bagdasar'yan, Kh. S., Sinitsy*na, Z. A., Milyutinskaya, R. I.

TITLE: Kinetic study on the effect of antioxidants during the oxidation of rubber. I. Kinetics of the uninhibited oxidation of rubber

SOURCE: Khimicheskiye svoystva i modifikatsiya polimerov (Chemical properties and the modification of polymers); sbornik statey. Moscow, Izd-vo Nauka, 1964, 265-271

TOPIC TAGS: synthetic rubber, rubber oxidation kinetics, antioxidant, benzoylperoxide, azodiisobutyronitrile

ABSTRACT: The kinetics of oxidation of 0.1 g specimens of sodium-butadiene rubber were studied at 60-100C under constant oxygen pressure in a thermostat equipped with a differential manometer, and also with oxygen circulation and freezing out of the decomposition products in a cold trap. The specimens were purified by reprecipitation and deposited from benzene solution as approximately 0.1-mm thick films. The tests showed that oxidation rates increased during an initial period, and that this lag period does not depend on the presence of inhibitors or their consumption. A second and nearly stationary period was followed by the rapid decrease of oxidation rates in the third and final period. The initial period was not affected by removal of oxidation products, nor by the thickness

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ACCESSION NR: AT4049866

of the film, and addition of up to 3.58% benzoylperoxide or 4.68% azoisobutyrodinitrile did not change the rate of the stationary process, although the initial period decreased. The concentration of peroxides was determined in some runs by iodometric titration, revealing a stationary peroxide concentration of 23 and 14.5 mmol/mol monomer at 80 and 100° respectively, within an error of 2 and 3 mmols. The kinetic model was based on a radical chain reaction with branching and R. and RO_2. as species for rate determination. The stationary rate was found to be proportional to oxygen pressure and to increase with temperature; the effective activation energy was approximately 15 kcal/mol, the branching factor was at least 0.35, and the rate constant for decomposition of rubber peroxide was $(2. \_ 0.5) \cdot 10^{-2}$ min $^{-1}$ with an activation energy of approximately 21 kcal/mole. "The decomposition of benzoyl peroxide in rubber was studied by E. A. Trosman in the authors' laboratory. The authors thank A. S. Kuz'minskiy and L. G. Angert for helping with the work and evaluating the results." Orig. art. has: 1 table, 4 figures and 18 formulas.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 18Jul63 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 003 OTHER: 002

Card 2/2

[redacted]; MIKHUTINSKAYA, R.I.

Kinetic study of the effect of [illegible] of rubber [illegible]cation. Part 2. Vysokom. soed. 6 no.6:1098-1103 Je '64 (MIRA [illegible])

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

MILYUTINSKAYA, R.I.; BAGDASAR'YAN, Kh.S.

New data on the sensitized formation of cation radicals in the low temperature radiolysis of films containing aromatic amines. Zhur. fiz. khim. 38 no.3:776-778 Mr '64.
(MIRA 17:7)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

MILYUTINA, Z. N.

PHASE I BOOK EXPLOITATION SOV/5337

Panasenkova, Ye. I., ed.

Issledovaniya kriticheskikh parametrov reaktornykh sistem; sbornik statey (Study of Critical Parameters of Reactor Systems; Collection of Articles) Moscow, Gosatomizdat, 1960. 117 p. Errata slip inserted. 3,600 copies printed.

Tech. Ed.: N.A. Vlasova.

PURPOSE: This collection of articles is intended for nuclear physicists and engineers of nuclear power plants.

COVERAGE: The book contains previously unpublished original articles concerned with the theoretical calculation of neutron fluxes and of critical parameters (critical masses and volumes) of various reactor systems: uranium-graphite, uranium-beryllium, and water mixtures of uranium and plutonium. Individual articles present tables and graphs used in the determination of the dependence of critical parameters on the relative concentration and the character of the fissionable material and the moderator, as well as on fuel enrichment for a wide range of neutron energy spectra. The following are mentioned: P.A. Gavrilov (scientific editor of the collection), and S.I. Sokolov, L.N. Spakhova,

Card 1/3

AVAILABLE: Library of Congress

Card 3/3

JA/dwm/mac
7-29-61

ACCESSION NR: AP4040489 S/0190/64/006/006/1098/1103

AUTHORS: Bagdasar'yan, Kh. S.; Milyutinskaya, R. I.

TITLE: Kinetic investigation of the action of inhibitors of rubber oxidation

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 6, 1964, 1098-1103

TOPIC TAGS: rubber oxidation inhibitor, oxidation induction period, molecule lifetime, oxidation initiator, sodium butadiene rubber

ABSTRACT: The authors studied the inhibited oxidation of sodium butadiene rubber in the temperature interval 90-100°. They found that the duration of the induction period for various inhibitors varies by a factor in excess of 100. The amount of oxygen utilized during the induction period is from 10 to 1000 times the amount of the added inhibitor. The inhibited oxidation of rubber has been analyzed for the case when the reciprocal of the rubber-peroxide decomposition constant is much less than the induction period. The induction period τ may be represented by the approximation $\tau \approx \beta x_0 (1-\delta) V_{in}$, where β is the inhibition coefficient (ranges from 0 to 2), x_0 the initial concentration of the inhibitor, δ the regeneration coefficient of the inhibitor (ranges from 0 to 1), and V_{in} the initiation rate.

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ACCESSION NR: AP4040489

Regeneration of the inhibitor molecules is probably due to disproportionation of the inhibitor radical and the polymer radical. The addition of an oxidation initiator diminishes the induction period in such a way as to suggest that the initiator radical reacts directly with the inhibitor molecules. The conclusion on the effective regeneration of inhibitors is based on the assumption that the true amount of absorbed oxygen in the induction period is near the threshold value observed by experiment. If the first value is much larger than the second, it is then necessary to determine the absolute value of $\beta/(1-\delta)$ in order to explain the causes for differences in the efficiency of the inhibitors. Orig. art. has: 1 figure, 2 tables, and 17 formulas.

ASSOCIATION: Fiziko-khimicheskiy institut im. V. L. Karpova (Physicochemical Institute)

SUBMITTED: 18Jul63 ENCL: 00

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

Card 2/2

MILYUTKIN, A. F., Cand Agr Sci -- (diss) "Growing of sugar sorghum for silage in Balashovskaya Oblast." Saratov, 1957. 19 pp (Min Agr USSR, Saratov Agr Inst), 150 copies (KL, 1-58, 120)

ANOSOV, V.I.; SAVOSTIN, A.M.; PINES, V.G.; MILYUTKINA, V.P.; MIROPOL'SKAYA, M.A.; FEDOTOVA, N.I.; SAMOKHVALOV, G.I.

Preparation of γ-,γ-dimethylallyl alcohol and isopropenylethyl alcohol from the product resulting from the condensation of isobutylene. Zhur. ob. khim. 31 no.4:1154-1157 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.
(Butenol) (Pentenol)

SOV/137-58-7-15385

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 208 (USSR)

AUTHORS: Ipat'yev, V.V., Ivanova, M.A., Milyuts, G.B.

TITLE: Formation of Scale on 25% Iron-nickel Steel in Air Containing Water Vapor and Sulfur Dioxide (Okalinoobrazovaniye na 25-protsentnoy zhelezo-nikelevoy stali v vozdukhe, soderzhashchem vodyanoy par i sernistyy gaz)

PERIODICAL: Uch. zap. LGU, 1957, Nr 227, pp 48-58

ABSTRACT: Investigation of the kinetics of the oxidation and the structure of scale on steel containing 23.6% Ni at 750-980°C in dry air, moist air (10-20% H_2O), steam, and moist air with addition of 1-5% SO_2. The rate of oxidation was determined by the method of periodic weighing during a test lasting up to 120 hrs. It was determined that an increase in the humidity of air up to 10-15% sharply increases the speed of oxidation of a given steel. Addition of 1-5% SO_2 to the moist air at 750-800° shows no appreciable influence on the rate of oxidation of Ni and steel. The structure and the order of sequence of layers of scale on steel recall the scale forming on Fe under analogous conditions. Unoxidized Ni concentrates in the inner

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Formation of Scale on 25% Iron-nickel Steel in Air (cont.)

heterogenous layer of scale and its content in this layer is 150-200% higher than in the original steel. FeO as a separate layer in the scale forms only on addition to the air of ~1% H_2O. The comparative thickness of this layer increases with an increase in the humidity of the medium. Addition of up to 5% SO_2 does not change the appearance of the scale formed.

V.S.

1. Nickel steel--Scale 2. Nickel steel--Oxidation 3. Nickel steel--Moisture factors

Card 2/2

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Testing motion-picture projectors in workshops and repair stations. Kinomekha nik no.10:33-37 O '53. (MLRA 6:10)
(Moving-picture projectors)

MILZ, V.

TECHNOLOGY

PERIODICAL: EPULETGEPESZET. Vol. 4, no. 6, 1955

Milz, V. Problems of supplementary constructions in connection with the mass erection of dwellings; also, remarks by J. Varady and A. Hedry. p. 110.

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[redacted], V.

Investigation of conditions for operation of steam boilers, p. 92, EPULETGEPKZET, (Epitoipari Tudomanyos Egyesulet) Budapest, Vol. 5, No. 4, 1956

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 11, November 1956

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Compensating background noise. Radio no.6:44 Je '57. (MLRA 10:7)
(Amplifiers, Electron-tube)

Mils, V.

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(Coal—Analysis)

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"The effect of antibiotics and antiseptics in vitro on the ozena bacterial flora and on Klebsiella rhinoscleromatis." p. 175.
(Yugoslavia. Vol. 1, 1951, Zagreb.)

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(POLLEN)