YUKHNOVETS, N. I.

PA 254T75

..R/Geophysics - Magnetic Anomalies Mar/Apr 53

"Variation in the Magnetic Properties of Mineral ..ks in a Fracture Zone," G. N. Petrova and N. I. Yukhnovets, Geophys Inst, Acad Sci USSR

.. Ak Nauk SSSR, Ser Geofiz, No 2, pp 115-123

Explanation of the causes of the formation of nega- ..ve magnetic anomalies which are adapted to the fracture zone. Measurement of magnetic susceptibil- ..y showed that rocks of the fracture zone are less ..sceptible than unbroken rocks of the same petro- graphic composition. Investigation by models gives

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..ason to assume that even partial disruption of ... vector of residual magnetization may be signi- ..ant.

..T75

YUKHNOVICH, A.N., veter. vrach (Yel'ninskiy rayon, Smolenskoy oblasti); RUDOMETKIN, Ya.S., veter. vrach; EVENTOV, M.Z., veter. vrach; SOBOLEV, A.S., dotsent (Estonskaya SSR); DOL'NIKOV, Yu.Ya., kand. veter. nauk; PALIMPSESTOV, M.A., prof.; SIMONENKO, N.M., dotsent; GONCHAROV, A.P., assistent; BEZRUKOV, A.A.; FROLENKOV, N.A., veter. vrach (Serov, Sverdlovskoy oblasti); KOSHCHEYEV, P.M.; VOROB'YEV, M.M., kand. veter. nauk; YANCHENKO, P.Kh., veter. vrach; AMELIN, I.P.; BYCHKOV, A.I., kand. veter. nauk; SHVYREV, G.I., veter. vrach (Stavropol'skiy kray); DANILIN, N.F.; TRUSHIN, A.Z., veter. vrach; SKRYPNIKOVA, T.K., veter. fel'dsher; MIKHEYEV, A.D.; KARMANOVA, Ye.M., kand. biol. nauk; REMIZOV, Ye.S., mladshiy nauchnyy sotrudnik; ANTIPIN, D.N., referent

From helminthological practice. Veterinariia 38 no.7:55-58 Jl '61. (MIRA 16:8)

1. Reshetovskiy veterinarnyy uchastok, Novosibirskoy oblasti (for Rudometkin). 2. Sovkhoz "Buda-Koshelevskiy" Gomel'skoy oblasti (for Eventov). 3. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut (for Dol'nikov). 4. Khar'kovskiy veterinarnyy institut (for Palimpsestov, Simonenko, Goncharov). 5. Blagoveshchenskiy sel'skokhozyaystvennyy institut (for Bezrukov). 6. Novo-Nikolayevskiy veterinarnyy uchastok Krasnodarskogo kraya (for Lochkarev). 7. Karpilovskiy veterinarnyy uchastok Chernigovskoy oblasti (for Ponomarenko). 8. Kamalinskiy veterinarnyy uchastok Krasnoyarskogo kraya (for Koshcheyev).

(Continued on next card)

YUKHNOVICH, M.V.

Injuries of the hands due to radiation. Vrach. delo no.9:49-53 S '61.
(MIRA 14:12)

1. Rentgenodiagnosticheskiy otdel (zav. - kand.med.nauk A.I.Pozmogov) Kiyevskogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo onkologicheskogo instituta.
(RADIATION--PHYSIOLOGICAL EFFECT)
(HANDS--WOUNDS AND INJURIES)

YUKHNOVICH, M.V.

Diagnostic errors in a complex anomaly [illegible]
/2 [illegible].11:73-74 '64.

1. Kiyevskiy nauchno-issledovatel'skiy rentgeno-[illegible]
ortopedicheskiy institut [illegible]

ACC NR: AP7008174 SOURCE CODE: UR/0138/67/000/001/...

AUTHOR: Epshteyn, V. G.; Zakharkin, O. A.; Polyak, M. A.; Yukhnovich, S. G.

ORG: Yaroslavl Institute of Technology (Yaroslavskiy tekhnologicheskiy institut)

TITLE: Effect of additions of SKD-10 liquid polymer on the technological properties of compositions made with 100 percent of synthetic butadiene rubber

SOURCE: Kauchuk i rezina, no. 1, 1967, 13-14

TOPIC TAGS: synthetic rubber, butadiene rubber, polymer, vulcanized rubber, technical property/SKD 10 polymer

ABSTRACT: A method is proposed for improving the technological properties of compositions made with carboxylated butadiene rubber by introducing SKD-10 liquid polymer. The introduction of liquid polymer does not cause a deterioration of the physicomechanical characteristics of vulcanized rubber. Orig. art. has: 2 figures and 2 tables.

[NT]

SUB CODE: 11/SUBM DATE: 11Jul66/ORIG REF: 003/

Card 1/1 UDC: 678.762.2:678.062.004.12

GOLOMBIK, M. S.; PETIN, N. N.; YUKHNOVSKAYA, O. P.

Moscow State University, Laboratory of Chemical Kinetics, (-1940-).

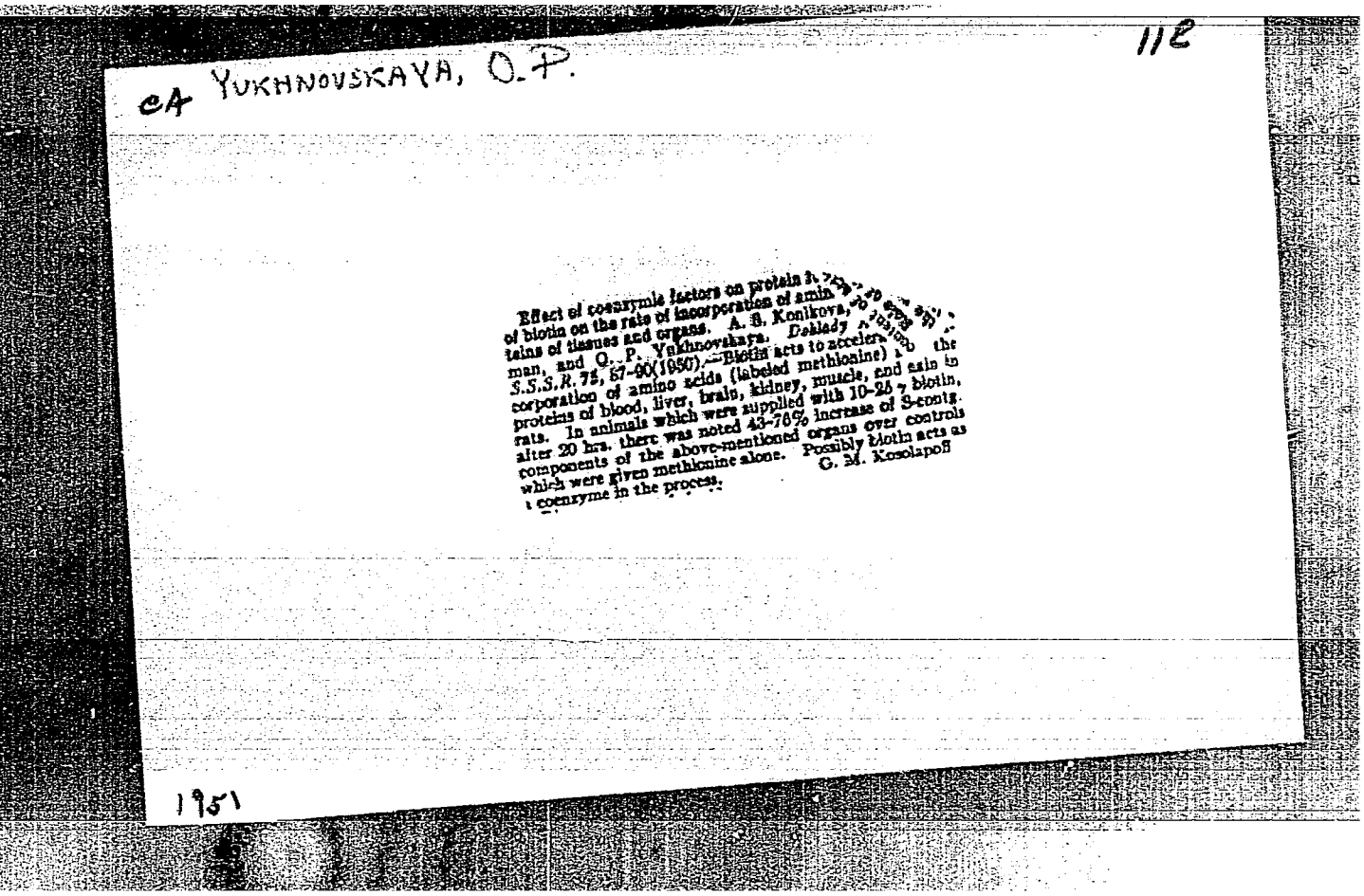
"The Question of the Inertness of Metals." Part II. "Periokic Phenomena on the Boundary (grantise) of Iron -- Nitric Acid Solutions."

Zhur. Fiz. Khim., Vol. 14, No. 5-6. 1940

SAMOYLOVICH, D.M.; BARINOVA, Ye.S.; VLASOV, A.A.; YUKHNOVSKAYA, O.P.

Investigating the sensitivity of emulsion R under various processing conditions. Zhur.nauch.i prikl.fot.i kin. 5 no.1:56-57 Ja-F '60. (MIRA 13:5)

1. Zavod tekhnicheskikh plastinok, Moskva.
(Photographic emulsions--Testing)



CA YUKHNOVSKAYA, O. P.

112

Effect of coenzyme factors on protein [illegible] of biotin on the rate of incorporation of amin[illegible] teins of tissues and organs. A. S. Konikova, [illegible] man, and O. P. Yukhnovskaya. *Doklady A[illegible] S.S.S.R.* 75, 87-90(1950).—Biotin acts to accelera[illegible] the corporation of amino acids (labeled methionine) i[illegible] ein in proteins of blood, liver, brain, kidney, muscle, and skin in rats. In animals which were supplied with 10-20 γ biotin, after 20 hrs. there was noted 43-76% increase of S-contg. components of the above-mentioned organs over controls which were given methionine alone. Possibly biotin acts as a coenzyme in the process. G. M. Kosolapoff

1951

Radiomethionine and D_2O studies of the [illegible] tems in rats with biotin deficiency. M. G. [illegible] [illegible] and G. E. Yurkevich [illegible] [illegible] 1955, [illegible] Zhur. Khim. Biol. Khim. 1955 [illegible]

[illegible] biotin deficiency [illegible] [illegible] in the proteins of the different organs [illegible] the proteins of organs of rats with [illegible] lower than in the controls. The administration of [illegible] biotin (II) per day on two successive days prior [illegible] tion of I raised its inclusion to normal. Deficiency [illegible] young rats has a more pronounced neg. effect than [illegible]

rats. In vitro expts. with organ tissues gave [illegible] sults. Rate of inclusion of I into the proteins [illegible] slices of the liver and [illegible] blood plasma in vitro [illegible] that the addn. of II to the [illegible] [illegible] into the proteins. [illegible]

SAMOYLOVICH, D.M.; BARINOVA, Ye.S.; VLASOV, A.A.; YUKHNOVSKAYA, O.P.

Increase of the sensitivity and development compensation in type "R" emulsions in glued condition. Zhur.nauch.i prikl.fot.i kin. 5 no.2:142-143 Mr-Ap '60. (MIRA 14:5)

1. Zavod tekhnicheskikh plastinok, Moskva.
(Photographic emulsions)
(Photography—Developing and developers)

[illegible], [illegible] F., ARLAZHEV [illegible], BARINOVA [illegible]

"On the chemical ripening of the R emulsion"

Fourth International Colloquium on Photography (Corpuscular - [illegible], Germany, 3-8 Sep 62

SAMOYLOVICH, D.M.; ARDASHEV, I.V.; BARINOVA, Ye.S.; RYABOVA, R.V.; YUKHNOVSKAYA, O.P.

Investigating the chemical ripening of type R emulsions. Zhur. nauch. i prikl.fot. i kin. 8 no.5:359-361 S-O '63.
(MIRA 16:9)

SKLYAREVSKIY, Lazar' Yakovlevich, kand. med. nauk; YUKHNOVSKAYA, S.I., red.

[Poisonous plants] IAdovitye rasteniia. Moskva, Meditsina, 1964. 47 p. (MIRA 17:11)

YAKOVLEV, Aleksandr Andreyevich, kand. med. nauk; YUKHNOVSKAYA, S.I., red.; BASHMAKOV, G.M., tekhn. red.

[Prevention of myopia; advice to parents] Preduprezhdenie blizorukosti; sovety roditeliam. Moskva, Medgiz, 1963. 15 p. (MIRA 17:2)

VLASOV, Viktor Alekseyevich; YUKHNOVSKAYA, S.I., red.; PETROVA, N.K., tekhn. red.

[Gastrointestinal diseases in young children] Zheludochno-kishechnye zabolevaniia u detei rannego vozrasta. Moskva, Medgiz, 1963. 18 p. (MIRA 17:4)

TSOPPI, Yelizaveta Ernestovna; YUKHNOVSKAYA, S.I., red.; PETROVA, N.I.; tekhn. red.

[Care of the sick child] Ukhod za bol'nym rebenkom. Moskva, Medgiz, 1963. 23 p. (MIRA 17:1)

NESTEROV, Anatoliy Innokent'yevich, prof.; YUKHNOVSKAYA, S.I., red.; PRONINA, N.D., tekhn. red.

[Rheumatic fever] Revmatizm. Moskva, Medgiz, 1963. 40 p. (MIRA 16:11)

1. Deystvitel'nyy chlen AMN SSSR (for Nesterov).
(RHEUMATIC FEVER)

SHENK, N.A.; YUKHNOVSKAYA, S.I., red.; KOKIN, N.M., tekhn. red.

[Treatment of the sequelae of poliomyelitis] Lechenie posledstvii poliomielita. Moskva, Medgiz, 1963. 45 p. (MIRA 17:1)

MANANNIKOVA, Nadezhda Vasil'yevna; BULYGINA, Yelizaveta Aleksandrovna; ROMANOVSKAYA, Sof'ya Yul'yevna; SHESTAKOVA, Natal'ya Petrovna; SHAPIRO, Sof'ya L'vovna; SHISHLYANNIKOVA, Mariya Abramovna; NOVOSELOVA, Raisa Semenovna; POPOVA, G.F., red.; YUKHNOVSKAYA, S.I., red.; KOKIN, N.M., tekhn. red.

[Course of lectures for gravidas and mothers] Kurs lektsii dlia beremennykh i materei. 7 lektsii. 5 izd. Moskva, Medgiz, 1963. 238 p. (MIRA 16:7)

(PRENATAL CARE) (WOMEN—HEALTH AND HYGIENE)
(INFANTS—CARE AND HYGIENE)

NOVOSELOVA, Raisa Semenovna; YUKHNOVSKAYA, S.I., red.

[Influenza and pulmonary inflammation in young children] Gripp i vospalenie legkikh u detei rannego vozrasta. Izd.5. Moskva, Medi'sina, 1964. 16 p. (Kurs lektsii dlia beremennykh i materei, no.7) (MIRA 17:6)

RAU, Yelena Fedorovna; YUKHNOVSKAYA, S.I., red.

[Stammering in children of preschool age] O zaikanii detei doshkol'nogo vozrasta. Izd.2. Moskva, Meditsina, 1964. 23 p. (MIRA 17:6)

LAPIN, Boris Arkad'yevich; LININ, Eman Petrovich; YUKHNOVSKAYA, S.I., red.

[Monkey farm in Sukhum] Obez'ianii pitomnik v Sukhumi. Moskva, Meditsina, 1964. 53 p. (MIRA 17:6)

STARKOV, Gennadiy Leonidovich; YUKHNOVSKAYA, S.I., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[How to preserve and improve the vision; talks by an eye doktor] Kak sokhranit' i uluchshit' zrenie; besedy glaznogo vracha. Izd.3., perer. Moskva, Meditsina, 1964. 54 p. (MIRA 17:3)

ZABLUDOVSKAYA, Yelena Davydovna; YUKHNOVSKAYA, S.I., red.

[Protect children from rickets] Oberegaite detei ot rakhita. Izd.2., ispr. i dop. Moskva, Meditsina, 1964. 55 p. (MIRA 17:4)

LYAKHOVITSKIY, Nikolay Solomonovich; YUKHNOVSKAYA, S.I., red.

[Trichomoniasis] Trikhomonoz. Moskva, Meditsina, 1964.
17 p. (MIRA 17:11)

DOBROVOL'SKAYA, Aida Aleksandrovna; YUKHNOVSKAYA, S.I., red.

[Abortion hazards] Vred aborta. Moskva, Meditsina, 1964.
26 p. (MIRA 18:2)

KASHKIN, Pavel Nikolayevich, prof.; YUKHNOVSKAYA, S.I., red.

[Prevention of fungous diseases] Preduprezhdenie gribkovykh zabolevanii. Moskva, Meditsina, 1964. 31 p. (MIR 17:11)

BULYGINA, Yelizaveta Aleksandrovna, kand. med. nauk; YUKHNOVSKAYA, S.I., red.

[Hygiene of the woman during pregnancy and the puerperium] Gigiena zhenshchiny vo vremia beremennosti i posle rodov. Izd.8. Moskva, Meditsina, 1964. 38 p. (Kurs lektsii dlia beremennykh i materei, no.2) (MIRA 17:12)

RAPIS, Yuriy Leonidovich; YUKHNOVSKAYA, S.I., red.

[Fluorography as a method for the early detection of pulmonary tuberculosis] Fliuorografiia - metod rannego vyiavleniia tuberkuleza legkikh. Moskva, Meditsina, 1965. 17 p. (MIRA 18:5)

VLASOVA, Natal'ya Aleksandrovna; KOCHERGINA, Vera Sergeyevna; YUKHNOVSKAYA, S.I., red.

[Stuttering is curable] Zaikanie izlechimo. Izd.2. Moskva, Meditsina, 1965. 35 p. (MIRA 18:3)

ZHUKOVSKIY, Mikhail Aleksandrovich, doktor med. nauk; YUKHNOVSKAYA, S.I., red.

[Endocrine diseases in children] Endokrinnye zabolevaniia u detei. Moskva, Meditsina, 1965. 57 p. (MIRA 18:2)

ZASLAVSKIY, Naum Izrailevich, kand. med. nauk; [illegible]
red.

[Diseases of the teeth and the oral cavity]
zubov i polosti rta. Moskva, Meditsina, [illegible]

[illegible], Lidiya Yakovlevna; LEBEDEVA, Aleksandra Filippovna; TARASOVA, Anna Vladimirovna; [illegible]

Prevention of [illegible] [illegible] [illegible] [illegible] [illegible]

DUL'TSIN, Yakov Abramovich, prof.; ROMACHEVSKIY, Gavri[illegible]
[illegible]ovich, kand. med. nauk; YUKHNOVSKAYA, [illegible]
[illegible]f.

"How to preserve woman's health" Kak sokhra[illegible]
[illegible], [illegible], [illegible], [illegible]

[illegible]

[To women on cancer] Zhenshchinam o rake. [illegible]

YAPPO, Tat'yana Aleksandrovna; YUKINOVSKAYA, S.I., red.

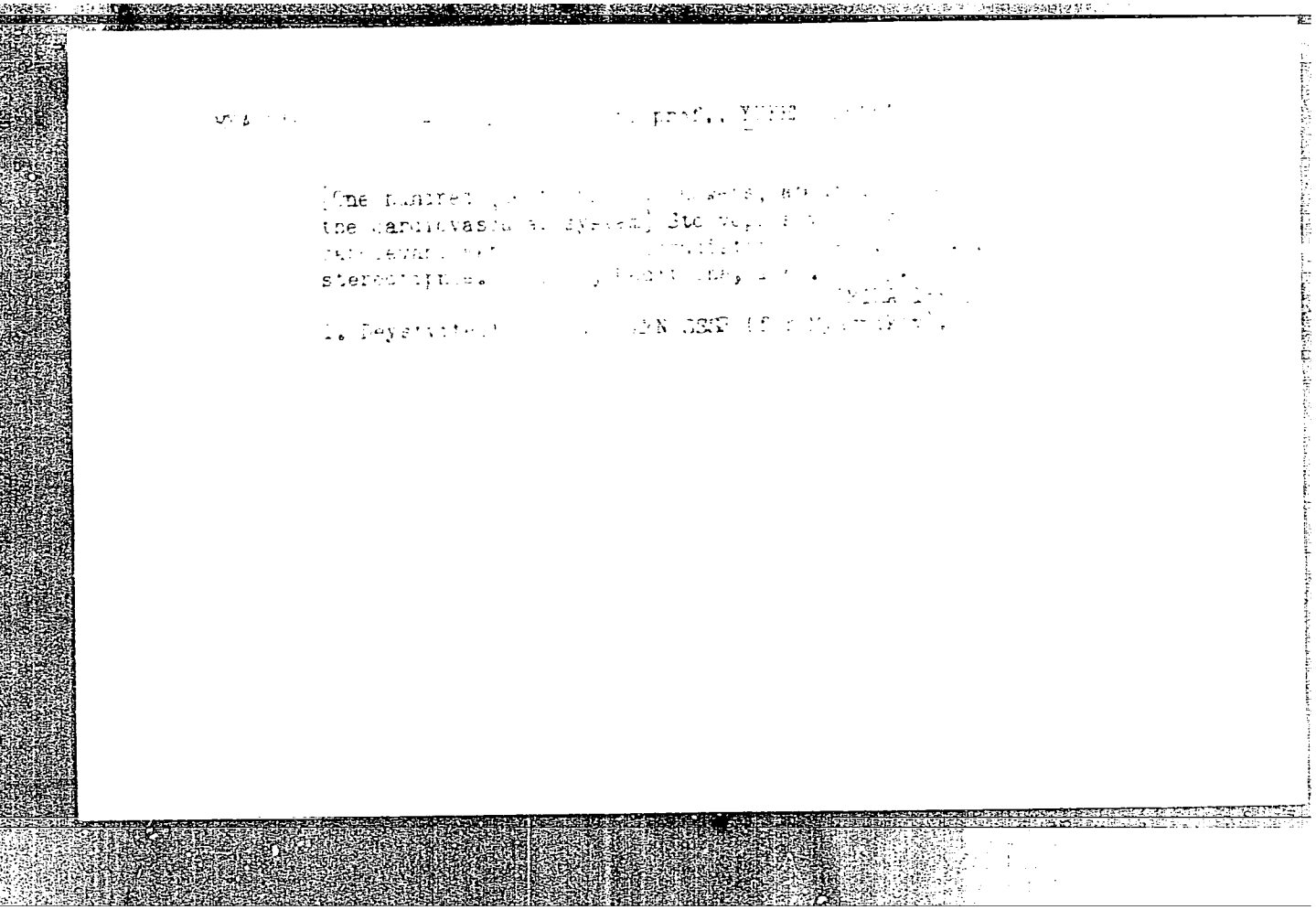
[Training children in hygienic habits] Vospitanie gigienicheskikh navykov u detei. Moskva, Meditsina, 1965. 29 p. (MIRA 18:9)

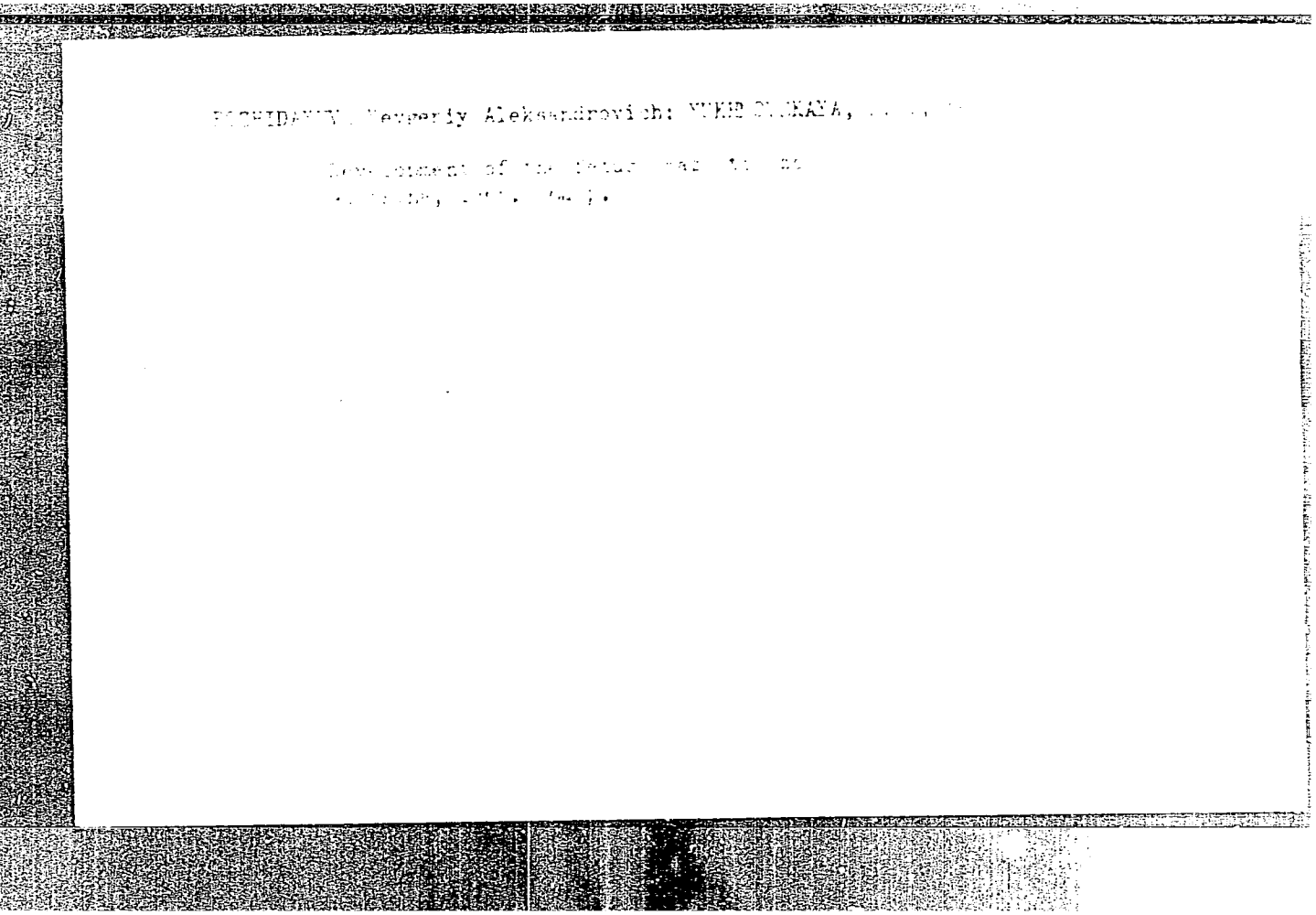
BRAGINSKAYA, Vera Pavlovna, kand. med. nauk; YUKHNOVSKAYA, S.I., red.

[Prevent infectious diseases in children] Preduprezhdaite zaraznye bolezni u detei. Moskva, Meditsina, 1965. 33 p.

KRIVITSKAYA, E.I.; YUKHNOVSKAYA, S.I., red.

[Know how to work and know how to rest] Umei trudit'sia - umei otdykhat! Moskva, Meditsina, 1965. 47 p.
(MIRA 18:10)





YURENEV, Pavel Nikolayevich; YUKHNOVSKAYA, S.I., red.

[Prevention of rheumatic fever in children] Preduprezhdenie revmatizma u detei. Moskva, Meditsina, 1965. 29 p. (MIRA 18:12)

VOLKOVA, L.S., kand. med. nauk; YUKHNOVSKAYA, S.I., red.

[Life of the infant before birth] Zhizn' rebenka do rozh-
deniia. Moskva, Meditsina, 1965. 67 p. (MIRA 18:12)

OGRYZKOV, Nikolay Ivanovich; YUKHNOVSKAYA, S.I., red.

[Benefit and harm from drugs] Pol'za i vred lekarstv. Moskva, Meditsina, 1965. 70 p. (MIRA 18:12)

YURENEV, Pavel Nikolayevich; YUKHNOVSKAYA, S.I., red.

[Prevention of rheumatic fever in children] Preduprezhdenie revmatizma u detei. Moskva, Meditsina, 1965. 29 p. (MIRA 18:12)

MAKARENKO, Nikolay Pavlovich; NEGRIMOVSKIY, Moisey Isaakovich; YUKHNOVSKAYA, S.I., red.

[Be careful in industry] Bud' ostorozhen na proizvodstve. Moskva, Meditsina, 1965. 83 p. (MIRA 18:6)

GRANAT, L.N.; IVANOVA, V.V.; YUKHNOVSKAYA, S.Yu., red.

[For the young mother] Molodoi materi. Moskva, Meditsina, 1965. 34 p. (MIRA 18:6)

YUKHNOVSKAYA, T.L. [IUkhnovs'ka, T.L.]

Working model of a plant for producing sugar from beets. Nauk. zap.Krem.derzh.ped.inst. no.4:103-107 '59. (MIRA 13:9)
(Sugar manufacture)

PYATIKOP, A.I., dotsent; BEZNOS, T.I., kand.med.nauk; LYUBETSKAYA, R.Ya.; PARFILO, A.V.; YUKHNOVSKAYA, Ye.N.

Treatment of fungous skin diseases with griseofulvin. Vest. derm. i ven. 38 no.4:47-50 Ap '64. (MIRA 18:4)

1. Ukrainskiy nauchno-issledovatel'skiy kozhno-venerologicheskiy institut (dir. - dotsent A.I.Pyatikop).

ALEKSIYEV, B.V.; IVANOV, Ch.P.; YUKHNOVSKI, Iv.N.

Stability and spectroscopic characteristics of the intermediate products formed in the nitration of some 2,3-disubstituted indones. Dokl. AN SSSR 150 no.1:89-92 My '63. (MIRA 16:6)

1. Khimikotekhnologicheskiy institut, Sofiya, Bolgariya. Predstavleno akademikom B.A.Kazanskim.
(Indone) (Nitration) (Spectrum analysis)

ALEKSIYEV, B.V.; IVANOV, Ch.P.; YUKHNOVSKI, Iv.N.

Interaction of 2,3-diaryl- and 2-aryl-3-alkylindones with nitrogen oxides. Dokl. AN SSSR 149 no.6:1315-1318 Ap '63. (MIRA 16:7)

1. Khimiko-tekhnologicheskiy institut, Sofiya, Bolgariya.
(Indone) (Nitrogen oxides)

L 42994-66 EWP(j)/T IJP(c) RM

ACC NR: AP6031801 SOURCE CODE: BU/0011/65/018/009/0817/0820

AUTHOR: Yukhnovski, I.

ORG: Institute of General and Inorganic Chemistry, BAN

TITLE: Calculation of binding energies of complex molecules based on the method of coupling coefficients

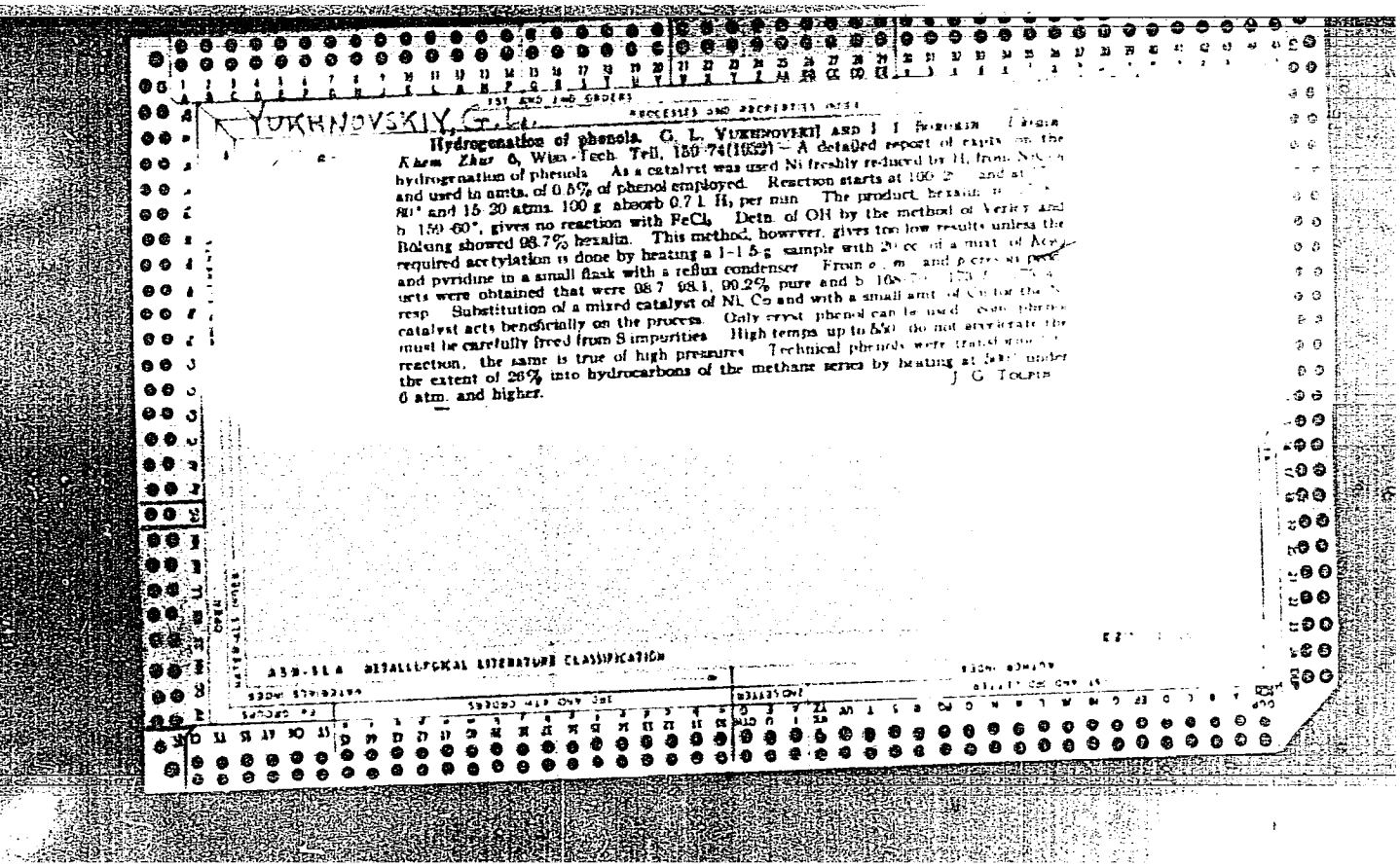
SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 9, 1965, 817-820

TOPIC TAGS: bond energy, molecular structure, electron energy, complex molecule, hydrocarbon

ABSTRACT: The method of coupling coefficients (Kh. S. Bagdasar'yan, Teoriya radikal'noy polimerizatsii (The theory or radical polymerization), AN SSSR, M., 1959) is especially simple and accessible among the proposed approximate methods for the calculation of π-electron energy of coupled molecules. This method was initially used for the calculation of alternating hydrocarbons and their radicals. The present article discusses, on the basis of Soviet and Western references, the possible extension of the method to the nonalternating and heteroatomic systems. The autor discusses various pertinent necessary empirical energy graphs and establishes a nomogram for fast evaluation of π-electron energies which can be used for the evaluation of radicals and to find the localization energies. This paper was presented by Academician D. Ivanov on 18 May 1965. Orig. art. has: 3 figures. [JPRS: 34,518]

SUB CODE: 20, 07 / SUBM DATE: 18May1965 / ORIG REF: 001 / SOV REF: 008
OTH REF: 003

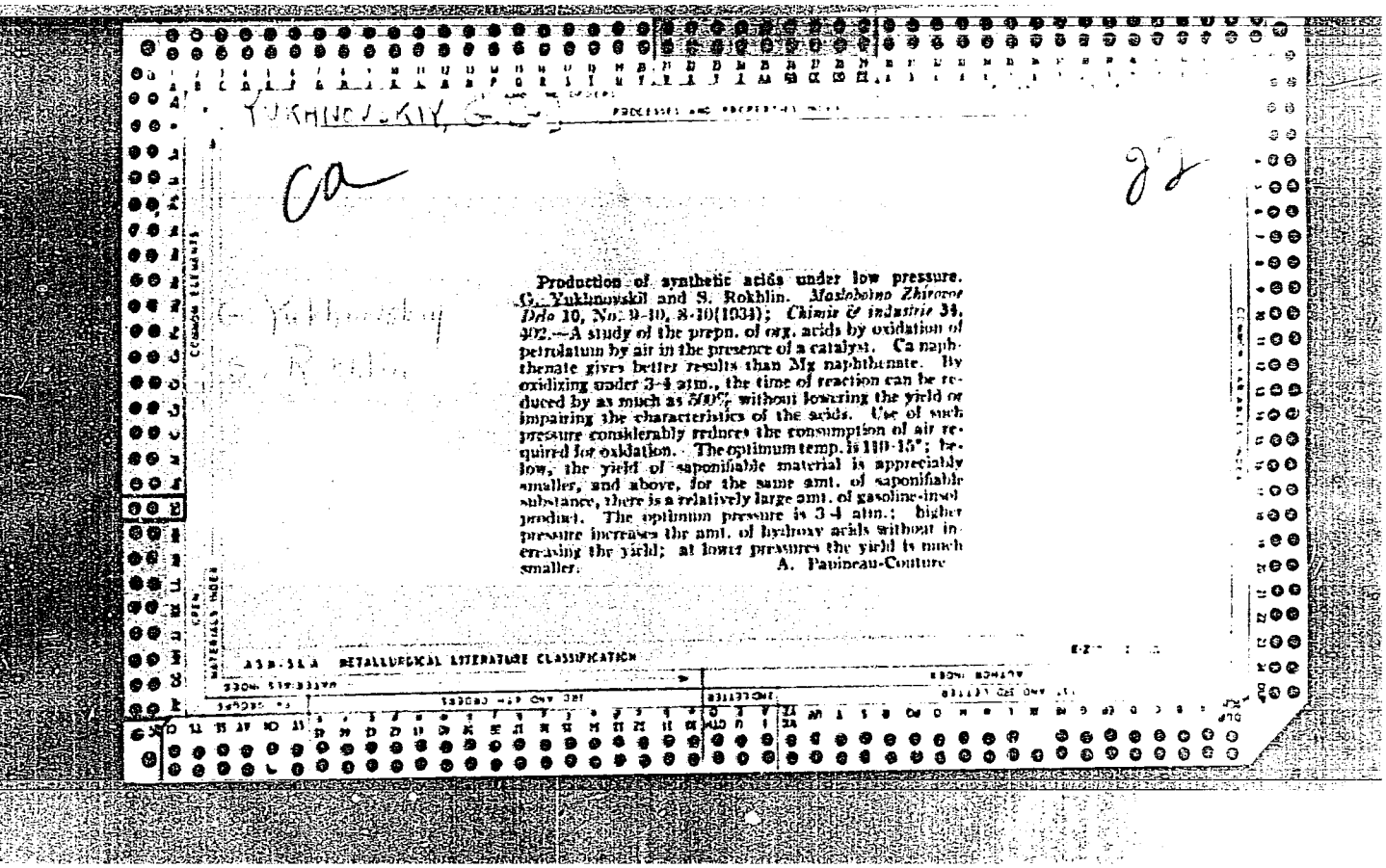
Card 1/1



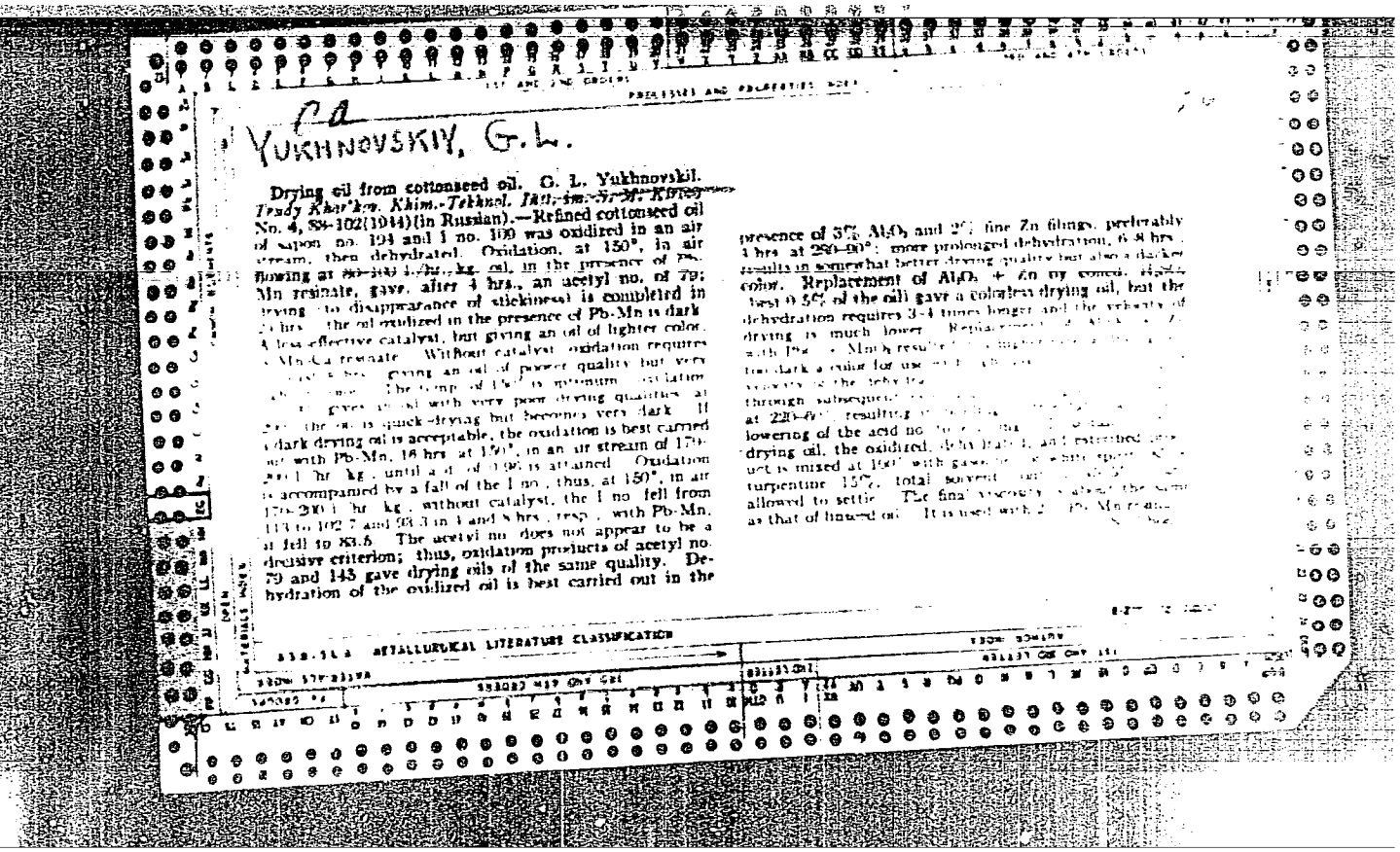
YUKHNOVSKIY, G. L.

Hydrogenation of phenols. G. L. YUKHNOVSKII AND [illegible] — A detailed report of experiments on the hydrogenation of phenols. As a catalyst was used Ni freshly reduced by H from NiO and used in amts. of 0.5% of phenol employed. Reaction starts at 100° and at 80° and 15-20 atms. 100 g. absorb 0.7 l. H, per min. The product, hexalin, b. 159-60°, gives no reaction with $FeCl_3$. Detn. of OH by the method of Verley and Bölsing showed 98.7% hexalin. This method, however, gives too low results unless the required acetylation is done by heating a 1-1.5 g. sample with 20 cc. of a mixt. of Ac$_2$O and pyridine in a small flask with a reflux condenser. From o-, m- and p-cresols pure products were obtained that were 98.7, 98.1, 99.2% pure and b. 168-[illegible] resp. Substitution of a mixed catalyst of Ni, Co and with a small amt. of Cu for the Ni catalyst acts beneficially on the process. Only cryst. phenol can be used; crude phenols must be carefully freed from S impurities. High temps. up to 550° do not accelerate the reaction; the same is true of high pressures. Technical phenols were treated with H to the extent of 26% into hydrocarbons of the methane series by heating at [illegible] under 6 atm. and higher.

J. G. TOURTIN



Production of synthetic acids under low pressure. G. Yukhnovskii and S. Rokhlin. *Maslobolno Zhirovoe Delo* 10, No. 9-10, 8-10(1934); *Chimie & industrie* 34, 402.—A study of the prepn. of org. acids by oxidation of petrolatum by air in the presence of a catalyst. Ca naphthenate gives better results than Mg naphthenate. By oxidizing under 3-4 atm., the time of reaction can be reduced by as much as 50% without lowering the yield or impairing the characteristics of the acids. Use of such pressure considerably reduces the consumption of air required for oxidation. The optimum temp. is 110-15°; below, the yield of saponifiable material is appreciably smaller, and above, for the same amt. of saponifiable substance, there is a relatively large amt. of gasoline-insol product. The optimum pressure is 3-4 atm.; higher pressure increases the amt. of hydroxy acids without increasing the yield; at lower pressures the yield is much smaller. A. Pavineau-Couture

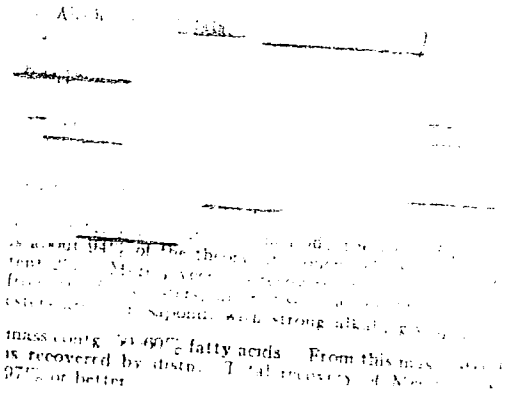


Ca

YUKHNOVSKIY, G. L.

Drying oil from cottonseed oil. G. L. Yukhnovskii. *Trudy Khar'kov. Khim.-Tekhnol. Inst. im. Tov. M. Kirova* No. 4, 89–102(1944)(in Russian).—Refined cottonseed oil of sapon. no. 194 and I no. 109 was oxidized in an air stream, then dehydrated. Oxidation, at 150°, in air flowing at [illegible] l./hr./kg. oil, in the presence of Pb-Mn resinate, gave, after 4 hrs., an acetyl no. of 79; Mn resinate, gave, after 4 hrs., an acetyl no. of 79; drying to disappearance of stickiness) is completed in 24 hrs. the oil oxidized in the presence of Pb-Mn is dark A less effective catalyst, but giving an oil of lighter color, Mn-Ca resinate. Without catalyst oxidation requires [illegible] giving an oil of poorer quality but very [illegible]. The temp. of 150° is optimum; oxidation [illegible] gives an oil with very poor drying qualities at [illegible] the oil is quick-drying but becomes very dark. If a dark drying oil is acceptable, the oxidation is best carried out with Pb-Mn, 16 hrs. at 150°, in an air stream of 170–200 l./hr./kg., until a d. of 0.96 is attained. Oxidation is accompanied by a fall of the I no., thus, at 150°, in air 170–200 l./hr./kg., without catalyst, the I no. fell from 113 to 102.7 and 93.3 in 4 and 8 hrs., resp., with Pb-Mn, it fell to 83.6. The acetyl no. does not appear to be a decisive criterion; thus, oxidation products of acetyl no. 79 and 143 gave drying oils of the same quality. Dehydration of the oxidized oil is best carried out in the presence of 3% Al_2O_3 and 2% fine Zn filings, preferably 4 hrs. at 280–90°; more prolonged dehydration, 6–8 hrs., results in somewhat better drying quality but also a darker color. Replacement of Al_2O_3 + Zn by conc. [illegible] best 0.5% of the oil gave a colorless drying oil, but the dehydration requires 3–4 times longer and the velocity of drying is much lower. [illegible] with 1% Mn-Ca [illegible] too dark a color for use [illegible] viscosity of the [illegible] through subsequent [illegible] at 220–6° resulting [illegible] lowering of the acid no. [illegible] drying oil, the oxidized [illegible] and extracted [illegible] uct is mixed at 150° with gas [illegible] turpentine 15%, total solvent [illegible] allowed to settle. The final viscosity [illegible] as that of linseed oil. It is used with 2% Mn [illegible]

[illegible] METALLURGICAL LITERATURE CLASSIFICATION



LUTSKIY, A.Ye.; YUKHNOVSKIY, G.L.

Il'ia Ivanovich Strelkov; 1898-1954; obituary. Ukr.khim.zhur. 20 no.3:335-339 '54. (MLRA 7:8)
(Strelkov, Il'ia Ivanovich, 1989-1954)

USSR . Scientists - Necrology

Card 1/1 Pub. 147 - 26/

Authors : Lu y, A. E.: Yuchrovskiy, ...

Title : Ilya Ivanovich Strelkov

Periodical : Zh. fiz. khim. 28/1, 205-20 , ...

Abstract : In commemoration of the first anniversary ... Strelkov (1898-1954), a eulogy is pres... chemist, member corresp. of the Academy ... essor of Colloidal Chemistry Faculty ... of the scientific books written ... Sixteen USSR references (1935-1954).

....

... 54

YUKHNOVSKIY, G.L.; POPENKER, R.R.

Styrene reactions with vegetable oils. Zhur.prikl.khim. 30 no.4:603-612 Ap '57. (MIRA 10:7)

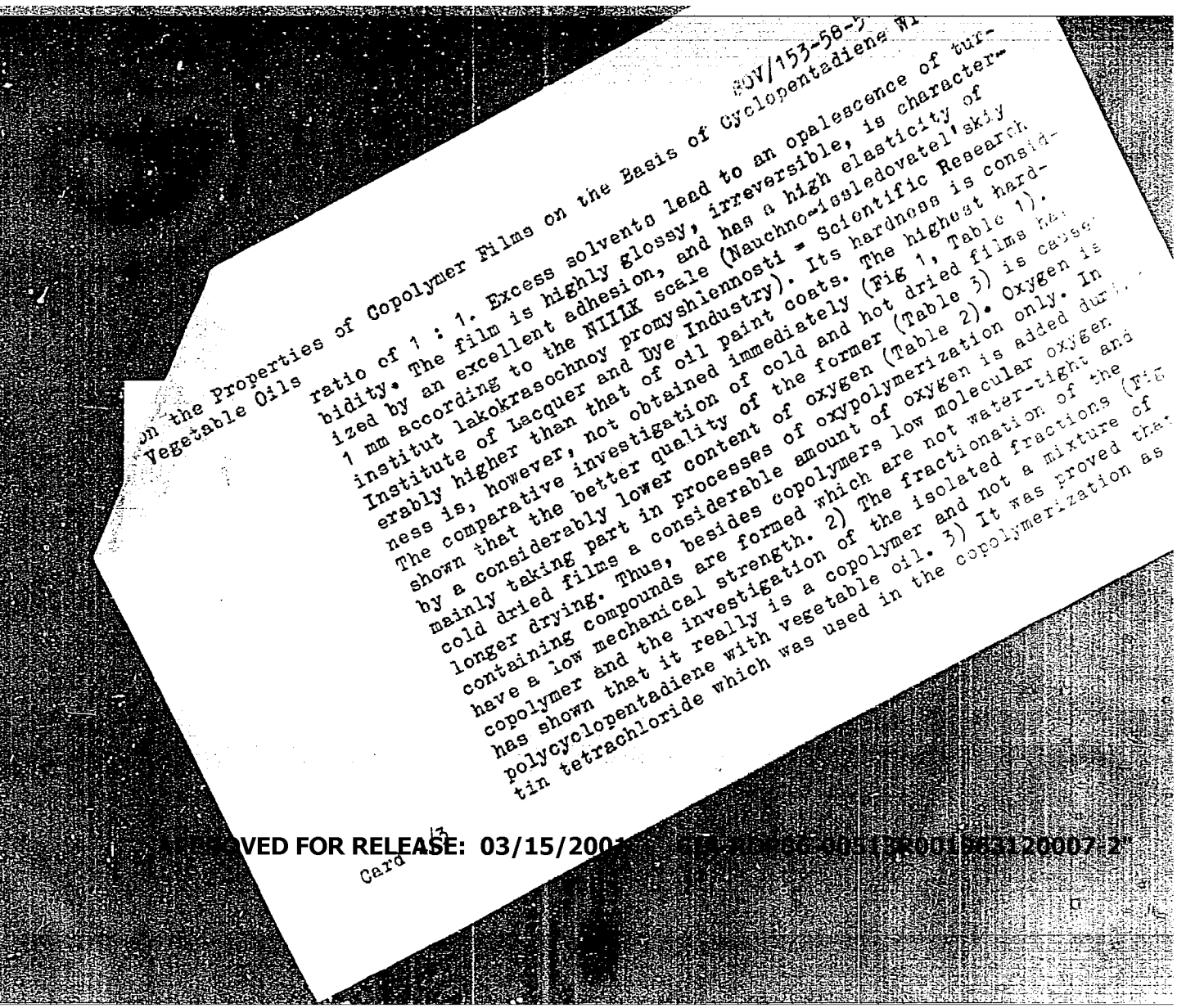
1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
(Styrene) (Oils and fats)

Yukhnovskiy, G. L., Prilutskaya, N. V. SOV/153-58-5-17/28

On the Properties of Copolymer Films on the Basis of Cyclopentadiene With Vegetable Oils (O svoystvakh plenok sopolimera na osnove tsiklopentadiyena s rastitel'nymi maslami)

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 100-106 (USSR)

Foreign patents concerning the film forming copolymers of cyclopentadiene with vegetable oils, alkyd resins, colophonium recommend a temperature of 200-300° and the application of pressure during copolymerization. The products obtained in this way form rapidly drying films of high hardness and gloss, the films are, however, not sufficiently elastic and resistant [illegible]. In an earlier paper (Ref 1) the authors had proved [illegible] possible to obtain a product meeting high require[illegible] [illegible] catalytic copolymerization of cyclopentadiene [illegible] and alkyd resins (1 : 1) in the [illegible] [illegible] per cent by weight). This cat[illegible] dichloro ethane. The copolymer [illegible] chlorinated and aromatic h[illegible] [illegible] ether and mineral [illegible]



SOV/153-58-5

on the Properties of Copolymer Films on the Basis of Cyclopentadiene Wi
Vegetable Oils

ratio of 1 : 1. Excess solvents lead to an opalescence of tur-
bidity. The film is highly glossy, irreversible, is character-
ized by an excellent adhesion, and has a high elasticity of
1 mm according to the NIILK scale (Nauchno-issledovatel'skiy
institut lakokrasochnoy promyshlennosti - Scientific Research
Institute of Lacquer and Dye Industry). Its hardness is consid-
erably higher than that of oil paint coats. The highest hard-
ness is, however, not obtained immediately (Fig 1, Table 1).
The comparative investigation of cold and hot dried films has
shown that the better quality of the former (Table 3) is caused
by a considerably lower content of oxygen (Table 2). Oxygen is
mainly taking part in processes of oxypolymerization only. In
cold dried films a considerable amount of oxygen is added dur-
longer drying. Thus, besides copolymers low molecular oxygen
containing compounds are formed which are not water-tight and
have a low mechanical strength. 2) The fractionation of the
copolymer and the investigation of the isolated fractions (Fig
has shown that it really is a copolymer and not a mixture of
polycyclopentadiene with vegetable oil. 3) It was proved that
tin tetrachloride which was used in the copolymerization as

Card 13

SOV/153-58-5-17/28

5(1, 3) AUTHORS: Yukhnovskiy, G. L., Prilutskaya, N. V.

TITLE: On the Properties of Copolymer Films on the Basis of Cyclopentadiene With Vegetable Oils (O svoystvakh plenok sopolimera na osnove tsiklopentadiyena s rastitel'nymi maslami)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 100-106 (USSR)

ABSTRACT: Most foreign patents concerning the film forming copolymers of cyclopentadiene with vegetable oils, alkyd resins, colophonium etc. recommend a temperature of 200-300° and the application of pressure during copolymerization. The products obtained in this way form rapidly drying films of high hardness and gloss, these films are, however, not sufficiently elastic and resistant to shocks. In an earlier paper (Ref 1) the authors had proved that it is possible to obtain a product meeting high requirements by the catalytic copolymerization of cyclopentadiene with e. g. linseed oil and alkyd resins (1 : 1) in the presence of stannic chloride (0.8-1 per cent by weight). This catalyst is dissolved in benzene or dichloro ethane. The copolymer produced in this way is soluble in chlorinated and aromatic hydrocarbons, turpentine, acetone, sulfuric ether and mineral spirits [illegible]

Card 1/3

On the Properties of Copolymer Films on the Basis of Cyclopentadiene With Vegetable Oils

ratio of 1 : 1. Excess solvents lead to an opalescence of turbidity. The film is highly glossy, irreversible, is characterized by an excellent adhesion, and has a high elasticity of 1 mm according to the NIILK scale (Nauchno-issledovatel'skiy institut lakokrasochnoy promyshlennosti = Scientific Research Institute of Lacquer and Dye Industry). Its hardness is considerably higher than that of oil paint coats. The highest hardness is, however, not obtained immediately (Fig 1, Table 1). The comparative investigation of cold and hot dried films has shown that the better quality of the former (Table 3) is caused by a considerably lower content of oxygen (Table 2). Oxygen is mainly taking part in processes of oxypolymerization only. In cold dried films a considerable amount of oxygen is added during longer drying. Thus, besides copolymers low molecular oxygen containing compounds are formed which are not water-tight and have a low mechanical strength. 2) The fractionation of the copolymer and the investigation of the isolated fractions (Fig 2) has shown that it really is a copolymer and not a mixture of polycyclopentadiene with vegetable oil. 3) It was proved that tin tetrachloride which was used in the copolymerization as

SOV/153-58-5-17/20

On the Properties of Copolymer Films on the Basis of Cyclopentadiene With Vegetable Oils

catalyst remains back in the copolymer as well as in the film without influencing the water-tightness and other properties of the films. There are 2 figures, 3 tables, and 11 references 6 of which are Soviet.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut, Kafedra tekhnologii lakov i krasok (Khar'kov Polytechnical Institute, Chair of Lacquers and Dyes)

SUBMITTED: December 13, 1957

Card 3/3

SOV/81-59-8-29646

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 588 (USSR)

AUTHORS: Yukhnovskiy, G.L., Rudenko, B.M.

TITLE: The Copolymerization of Oxidized Oil With Styrene

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1958, Vol 18, pp 135 - 142

ABSTRACT: It has been established by oxidation of refined sunflower oil under laboratory conditions (blowing through of air at temperatures of 80 - 160°C) that the maximum formation of conjugated dienes and peroxides in it takes place at 80 - 100°C. The copolymerization of styrene with oil oxidized at these temperatures and having a high viscosity, even without adding oils with conjugated double bonds (e.g., tung oil) into the reaction medium, produces a homogeneous product forming a transparent film.

N. Gardenin

Card 1/1

YUKHNOVSKIY, G.L.; PRILUTSKAYA, N.V.; CHERNOBAY, A.V.

Copolymerization of cyclopentadiene with vegetable oils.
Zhur. prikl. khim. 31 no.7:1091-1100 Jl '58. (MIRA 11:9)
(Polymerization) (Cyclopentadiene) (Oils and fats)

5(3)

AUTHORS: Yukhnovskiy, G. L., Chernobay, A.V. SOV/153-2-1-18/25

TITLE: Polymerization of Cyclopentadiene (Polimerizatsiya tsiklopentadiyena)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 1, pp 96-101 (USSR)

ABSTRACT: Cyclopentadiene (CPD) is not a very serviceable waste product of the coke plants of chemical industry. Due to two conjugated double bonds it has a high polymerization activity (Refs 1-5). Its polymer may be used as an underlying substance for varnishes. It can be polymerized both by the thermal and the catalytic method (see diagrams). In the air the polymer absorbs up to 20 wt% of oxygen and forms a powder with the total formula $(C_5H_6O)_n$. Polycyclopentadiene can be vulcanized in chloroform by sulphur sesquichloride. A brown, glassy, insoluble mass is produced by hydrogenation. There are only few data available of these processes. In this article the authors try to explain the possibilities of utilizing film-forming substances. In the experimental part they dealt with the action of the

Card 1/3

Polymerization of Cyclopentadiene

type of catalyst (Fig 1) on the transformation of CPD, the quantity of the catalyst, its concentration and that of the monomer (Fig 2), the action of the solvent (Fig 3), the properties of polycyclopentadiene, and finally the stabilization of polycyclopentadiene solutions. Table 2 contains the action of individual stabilizers on the viscosity of polycyclopentadiene solutions. The authors arrived at the following conclusions: The most efficient catalysts of CPD polymerization are complexes of boron trifluoride with organic substances (alcohols, ethers, and esters). At increased concentrations of the catalyst polycyclopentadiene is densified by the remaining double bonds. There are 3 figures, 2 tables, and 9 references, 5 of which are Soviet.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut; Kafedra tekhnologii lakov i krasok (Khar'kov Polytechnic Institute, Chair of the Technology of Varnishes and Dyes)

85377

S/081/60/000/017/015/016
A006/A001

5.1190 also 2209

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 17, p. 612, # 72080

AUTHORS: Yukhnevskiy, G.L., Prilutskaya, N.V.

TITLE: Catalytic Copolymerization of Cyclopentadiene With Alkyd Resins Modified by Oils

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1959, Vol. 26, pp. 123-131

TEXT: The authors studied the process of copolymerization of cyclopentadiene (I) with alkyd resins (II) modified by oils. It was established that with a higher concentration of the catalyst (stannic chloride, III) the reaction is more intensive and heat liberation is greater. At a concentration of III equal to 0.9-1% of the total weight of the mixture, self-heating attains the boiling temperature of the solvent. Viscosity of the copolymer solutions obtained increases with higher concentration of III. Polymerization of I in the presence of complexes III with acetic acid proceeds more rapidly than in the presence of III, particularly at the initial stage. The effect of the acidity of II on the copolymerization process was studied on the example of II with various acidity

Card 1/2

85377

S/081/60/000/017/015/016
A006/A001

Catalytic Copolymerization of Cyclopentadiene With Alkyd Resins Modified by Oils

numbers. It is shown that in copolymerization of I with II, a great effect on the bonding rate is exerted by the amount of free phthalic anhydride contained in II; the highest reaction rate is observed in the case when the III: phthalic anhydride ratio = 1 : 0.5. The authors studied the effect of the fatness of II and the nature of oil on the copolymerization rate. When using resins of lower fatness, a higher reaction rate is observed. A technological process is suggested for obtaining copolymers I - II in the presence of III, as a result of which viscous liquids are developed producing fast drying films which show good adhesion, hardness and elasticity.

L. Payman

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/081/60/000/018/006/009
A006/A001

15.8105

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 18, p. 543, # 75438

AUTHORS: Yukhnovskiy, G. L., Brodskiy, I. Ye.

TITLE: Inhibition of Emulsion Polymerization of Methylmethacrylate

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1959, Vol. 26, No. 6, pp. 221-223

TEXT: For the purpose of reducing the intensity of the process of polymethylmethacrylate polymerization (in the presence of an initiator and emulsifier at 75 - 80°C) and of preventing the branching of the polymer chains with the formation of transverse bonds, a hydroquinone inhibitor was used as a regulator in an amount of 0.006% of the monomer weight. An investigation of the relative viscosity of polymethylmethacrylate sulutions in dichlorethane, of the specific impact toughness and yield limit in static bending of polymethylmethacrylate bars with and without admixtures of hydroquinone showed that its introduction somewhat reduced the molecular weight and the specific impact toughness of the polymer. However these changes affect only slightly the physical properties of the finished product. Moreover, the use of hydroquinone has a most favorable effect on the technological process: homogeneity increases (in respect to the screen composition)

Card 1/2

85710

S/081/60/000/018/006/009
A006/A001

Inhibition of Emulsion Polymerization of Methylmethacrylate

as well as the yield of the commercial product; the conductance of the process is facilitated and the operational conditions of the equipment are improved.

T. Renard

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

SOV/80-32-5-30/52

5(3)

AUTHORS: Yukhnovskiy, G.L., Zu Hua-den[illegible]

TITLE: Epoxide Resins on the Base of Diphenylolethane (4,4'-Dioxydiphenylmethylmethane) and Phenolacetaldehyde Resins

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 1100-1105 (USSR)

ABSTRACT: The work is based on the raw material resources of Korea and intends to advocate the use of diphenylolethane (DPE) instead of diphenylolpropane, in order to avoid the use of the deficient acetone, from which the substance is synthesized. At a molar ratio of 1-2 mole of epichlorohydrine (ECH) to 1 mole DPE three-dimensional polymers are obtained which are not soluble in any solvent. This will also the presence of more than two functional groups in DPE. It is therefore necessary to use pure DPE without homologs. DPE was synthesized according to Vansheydt's method and then dissolved in benzene, toluene and xylene. The best solvent is benzene. On [illegible] the benzene solution, the homologs are precipitated first. DPE is [illegible] settling out in the form of crystals. DPE was synthesized at [illegible] phenol:acetaldehyde ratios, ranging from 4 to [illegible]

Card 1/2

Epoxide Resins on the Base of Diphenylolethane (4,4'-Dioxydiphenylmethylmethane) and Phenolacetaldehyde Resins

ratio of 4:1 together with DPE an equal amount of phenolacetaldehyde resin is obtained. The industrial DPE produced in Korea contains polyfunctional homologs of DPE. Pure DPE could be separated from it only in the amount of 1.5%. The principal product is phenol-acetaldehyde resin.
There are: 2 tables, and 9 references, 4 of which are Soviet, 2 American, 2 German and 1 English.

SUBMITTED: January 6, 1958

YUKHNOVSKIY, G.L.; RUDENKO, B.M.

Copolymerization of tung oil with styrene. Lakokras.mat.i ikh prim. no.3:32-35 '60. (MIRA 14:4)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
(Tung oil) (Styrene)

YUKHNOVSKIY, G.L., prof.; RUDENKO, B.M., inzh.

Characteristics of the oxidation of tung oil. Masl.-zhir.prom. 26 no.7:26-29 Jl '60. (MIRA 13:7)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
(Tung oil) (Oxidation)

BELEN'KIY, Ye.F. [deceased]; RISKIN, I.V.; YUKHNOVSKIY, G.L., prof., retsenzent; RATNIKOVA, K.I., dotsent, retsenzent; GOL'DBERG, K.M., kand.tekhn.nauk, retsenzent; IZYUMOV, V.N., inzh., retsenzent; AYZENBERG, Ye.S., red.; POMKINA, T.A., tekhn.red.

[Chemistry and technology of pigments] Khimiia i tekhnologiia pigmentov. Izd.3., ispr. i dop. Leningrad, Gos.nauchno-tekhn. izd-vo khim.lit-ry, 1960. 756 p. (MIRA 14:4)

1. Zaveduyushchiy kafedroy lakov i krasok Khar'kovskogo politekhnicheskogo instituta (for Yukhnovskiy). 2. Kafedra lakov i krasok Khar'kovskogo politekhnicheskogo instituta (for Ratnikova). (Pigments)

YUKHNOVSKIY, G.L.; CHERNOBAY, A.V.

Thermal copolymers of cyclopentadiene with vegetable oils.
Lakokras. mat. i ikh prim. no.6:20-22 '61. (MIRA 15:3)

1. Khar'kovskiy politekhnicheskiy institut.
(Cyclopentadiene) (Polymers)

YUKHNOVSKIY, G. L.

S/081/63/000/002/082/088
B117/B186

AUTHORS: Yukhnovskiy, G. L., Velosyuk, V. M.

TITLE: Some factors influencing the composition of products prepared by alcoholysis of oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 373, abstract 27J12 (Lakokrasochn. materialy i ikh primeneniye, sb. 4, 1962, 16-20)

TEXT: It was found that when triglycerides are made to undergo interesterification the same ratios as are commonly used for glycerol the theoretical content of monoglycerides in the mixture does not exceed 54-55%. At the same time the diglyceride content decreases, but not below 23-24%. If the product of interesterification in the equilibrium state is cooled below the lowest temperature required to ensure complete dissolution of the glycerol contained in the mixture, this results in a disproportionation of the composition and a decrease of monoglyceride content. Ethyl alcohol must not be used as solvent when checking the degree of alcoholysis. Methanol is recommended instead of ethyl alcohol.

Card 1/2

Some factors influencing the ...

[Abstractor's note: Complete translation.]

B/083/65/000/002/082/088
B117/B186

Card 2/2

S/191/62/000/009/003/012
B101/B144

AUTHORS: Yukhnovskiy, G. L., Popenker, R. R., Kuznetsova, V. M.

TITLE: Cold-setting epoxy-acrylate compounds

PERIODICAL: Plasticheskiye massy, no. 9, 1962, 14 - 16

TEXT: With a view to improving the thermostability of cold-setting epoxy compounds and avoiding the need to use toxic hardening agents, the redox copolymerization of epoxy resin with polymethyl methacrylate in the presence of methacrylic acid as hardening agent was investigated. Three compounds were produced. Compound 1: A solution of dimethyl aniline in methyl methacrylate is poured into the ЭД-6 (ED-6) epoxy resin. Polymethyl methacrylate powder is then stirred in, a solution of benzoyl peroxide in methacrylic acid is added (ratio methacrylate:methacrylic acid = 2:1), and a filler is added to the finished compound if necessary. The setting time amounts to 20 - 30 min, thermostability to 88°C according to Martens. For compound 2, dimethyl aniline is dissolved in a mixture of styrene and methyl methacrylate. Since this compound too had a short setting time, the addition of polymethyl methacrylate was omitted for

Card 1/2

...old-setting epoxy-acrylate...

compound 3. The setting time was 2 - 3 hr. Compounds 2 and 3 with marshalite as filler are suited for casting, or with a mixture of marshalite and asbestos they can be used as putty. The absorption of water after 170 hr was 0.17% for the casting compound and 0.33% for the putty. Compound 3 without filler has low viscosity and is suitable for casting into coils.

Card 2/2

YUKHNOVSKIY, G.L.; VOLOSYUK, V.M.

Effect of some factors on the composition of the products of oil alcoholysis. Lakokras.mat. i ikh prim. no.4:16-20 '62. (MIRA 16:11)

YUKHNOVSKIY, G.L.; VOLOSYUK, V.M.

Synthesis of alkyd resins with the method of step esterification.
Lakokras. mat. i ikh prim. no.5:18-21 '63. (MIRA 16:11)

SOROKIN, Mikhail Fedorovich; LYALYUSHKO, Kapitolina A...

ALAVERDOV, ...

[Practical laboratory work on synthetic polymers for lacquers] Praktikum po sinteticheskim polimeram dlia lakov. Moskva, Vysshaia shkola, 1965. 27... p.

1. Zaveduyushchiy kafedroy Khar'kovskogo Politekhnicheskogo instituta im. V.I.Lenina (for Yukhnovskiy).

YUKHNOVSKIY, I.R.

21T89

formula for approximation of binary function of distribution. Determines and analyzes the zero and 1st approximations. Received 1 Aug 51.

21T89

YUKHNOVSKIY, I.R.

USSR/Physics - Electrolysis

"Statistical Theory of Concentrated Solut. . Strong Electrolytes. II," A. Ye. Glauberman, I. R. Yukhnovskiy, Lvov State U

"Zhur Eksper i Teoret Fiz" Vol XXII, No 5, pp 572-578

On the basis of the previous work [see previous abstract] and general statistical conceptions, derives a formula for the activity coeffs which in the case of small concns passes into the familiar Debye law. Compares theoretical and expt'l data. Received 1 Aug 51.

YUKHNOVSKIY, I.R.

GLAUBERMAN, A.Ye.; YUKHNOVSKIY, I.R.

"Superpositional" approximation in the theory of systems of interacting particles. Dokl.AN SSSR 93 no.6:999-1002 D '53. (MLRA 6:12)

1. Predstavleno akademikom M.A.Leontovichem.
(Particles) (Nuclear physics)

YUKHNOVSKIY, I. R.

"Binary Distribution Function for a System of Interacting Charged Particles." Cand Phys-Math Sci, L'vov U, L'vov, 1954. (RZhKhim, No 17, Sep 54)

SO: Sum 432, 29 Mar 55

YUKHNOVSKIY, I.R.

USSR

6776. The binary distribution function for a system of charged interacting particles. I. I.R. Yukhnovskii. Zh. eksper. teor. Fiz. 27, No (6 2) 690-8 (1954) In Russian. 530 162

A procedure is given for solving Bo[illegible] equations for a system of interacting particles [illegible] resultant charge [N. N. Bogoliubov, Problems of dynamical theory in statistical physics, GTTI, 194[illegible]]. The interaction is described by a phenomenological potential $\varphi(r) = (1 - e^{[illegible]})/r$. General expressions are derived for the 1st, 2nd, ... k-th approximation to the binary distribution function, with the [illegible] as the expansion parameter. [illegible] graphs are introduced [illegible] correlation corrections which [illegible] require increasing numbers with increasing k. Numerical applications are not attempted.

W. J. SWIATECKI

AUTHOR: Yukhnovskiy, I. R. 56-2-16/51

TITLE: The Application of Collective Variables and the Taking Into Consideration of Short Range Forces in the Theory of the Systems of Charged Particles (Primeneniye kollektivnykh peremennykh i uchet korotkodeystvuyushchikh sil v teorii sistem zaryazhennykh chastits)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol 34, Nr 2, pp. 379-389 (USSR)

ABSTRACT: The present work calculates the free energy as well as the binary and the ternary distribution functions of the systems of charged particles, taking into consideration the short range forces. The first chapter of this work deals with the formation of the problem. Bogolyubov suggested the investigation of a compound problem: The calculation of the statistical integral of an ion system in which the short range forces in the coordinate space and the long range forces are described by collective variables. The present work is also dealing with the solution of this problem. The author investigates a system of ions of K

Card 1/3

The Application of Collective Variables and the Taking Into Consideration of Short Range Forces in the Theory of the Systems of Charged Particles

56-2-16/31

different types in equilibrium and neutral as a whole, N_a ions of any kind being present. The interaction is described by an "exact" potential. In the calculation of the free energy of this system a collective variable and a Fourier transform are introduced. Then an expression for the integral of configuration is put down. The potential energy of the Coulomb interaction is replaced by the potential energy of a system of harmonic oscillators and then the author integrates over the amplitudes of these oscillators. The potentials with short range are not expanded into a Fourier series but are left in the coordinate representation. Then a transition function for the Coulomb potential is deduced. The second chapter deals with the configuration integral for the case of the Coulomb interaction potential. The complete expression for the principal value of the statistical integral is an exponential function. Then a formula is deduced for the free energy of a Coulomb system and is also specialized for small concentrations. Then it is easy to pass on to the construction of the distribution functions and of the

Card 2/3

The Application of Collective Variables and the Taking Into Consideration of Short Range Forces in the Theory of the Systems of Charged Particles

56-2-16/51

thermodynamic functions with the taking into account in the interaction energy all central forces of long and short range. Also a system of ions in external fields can be investigated. By means of the results of the 2 above mentioned chapters the system of charged particles with exact interaction law can be investigated in two different ways obtaining the same results each time. The present work uses the method in which the characteristics of free energy as deducing potential are made use of. The course of calculation is followed step by step and the final formula found for the free energy is put down explicitly. There are 7 references, 5 of which are Slavic.

ASSOCIATION: L'vov State University (L'vovskiy gosudarstvennyy universitet)

SUBMITTED: June 15, 1957

AVAILABLE: Library of Congress

Card 3/3 1. Charged particles-Mathematical analysis

Yukhovskiy, I. R.

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PHASE I BOOK EXPLOITATION SOV/2809

Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk

Termodinamika i stroyeniye rastvorov; trudy soveshchaniya... (Thermodynamics and Structure of Solutions; Transactions of the Conference Held January 27-30, 1958) Moscow, Izd-vo AN SSSR, 1959. 295 p. 3,000 copies printed.

Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences; Ed. of Publishing House: N. G. Yegorov; Tech. Ed.: T. V. Polyakova.

PURPOSE: This book is intended for physicists, chemists, and chemical engineers.

COVERAGE: This collection of papers was originally presented at the Conference on Thermodynamics and Structure of Solutions sponsored by the Section of Chemical Sciences of the Academy of Sciences, USSR, and the Department of Chemistry of Moscow State University, and held in Moscow on January 27-30, 1958. Officers of the conference are listed in the Foreword. A list of other reports

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also read at the conference, but not included in this book, are given. Among the problems treated in this work are: electrolytic solutions, ultrasonic measurement, dielectric and thermodynamic properties of various mixtures, spectroscopic analysis, etc. References accompany individual articles.

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