"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, Istvan, dr.

[redacted]

Istvan Hollos, 1872-1957. Ideg. szemle 10 no.2:64 May 57.
(OBITUARIES
Hollos, Istvan (Hun))

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, Istvan, Dr.

Place and significance of psychotherapy in medical practice. Orv. hetil. 99 no.23:778-782 8 June 58.

1. A Janos Korhaz Rendelointezet (igazgato: Bakacs Tibor dr.) Idegosztalyanak (foorvos: Gereb Tibor dr.) kozlemenye.
(PSYCHOTHERAPY
place & significance in med. practice (Hun))

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, I., dr.

The use of frenolon in ambulant psychiatric practice. Ther. hung. 9 no.3/4:21-24 '61.

1. Pest County Council, Psychiatric Centre (Head: Dr. I. Hardi), Budapest.
(TRANQUILIZING AGENTS) (PERPHENAZINE)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, Istvan, dr.

Observations on the psychology of nursing. Magy pszichol szemle 18 no.1:53-60 '61.

1. Pestmegyei Tanacs Idegbeteggondozoja vezetoje.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, Istvan, dr.

"Handbook on the science of neuroses and psychotherapy" by V.E. Frankl, V.E.Gebsattel and J.H.Schultz. Vol.1: "General science of neuroses and general psychotherapy", Vol.4: Special psychotherapy II. and prophylaxis of neuroses." Reviewed by Istvan Hardi. Magy psaichol szemle 18 no.2:240-244 '61.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HANDI, Istvan

SURNAME, Given Names

Country: Hungary

Academic Degrees: Dr

Affiliation: [not given]

Source: Budapest, Magyar Pszichologiai Szemle, Vol XVIII, No 2, 1961, pp 244-246

Data: Review of "Handbook of Neuroses and Psychotherapy. Volumes I and IV," by V. E. Frankl, V. E. Gebsattel and J. H. Schultz. Munich-Berlin, 1959.

GPO 981643

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, Istvan, dr.; PAJZS, Zsuzsanna, dr.

Therapy of depressive conditions with levomepromazine. Orv.hetil. 102 no.8:353-357 19 F'61.

1. Pestmegyei Tanacs Idegbeteggondozo Intezete es a Janos Korhaz-Rendelointezet Bajmegallapito Osztaly.
(TRANQUILIZING AGENTS ther)
(DEPRESSION ther)
(PSYCHOSES MANIC DEPRESSIVE ther)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDI, Istvan, dr.

"Suggestion" by Berthold Stokvis and Manfred Pflanz. Reviewed by Istvan Hardi. Magy pszichol szemle 21 no. 1: 133-134 '64.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

1813. **Studies of cervical carcinoma with the phase contrast microscope**
Die Untersuchungen der Portiokarzinome mit Hilfe der Phasenkontrastmikroskopie. SVEJDA J., HARDLIČKA M. and PTÁČKOVÁ B. Path.-Anat. Inst. und Onkol. Inst., Med. Fak der Masaryk-Univ., Brünn *Z. Geburtsh. Gynäk.* 1958, 150/2 (193-200)

Phase contrast microscopy was employed in examination of 357 women. In 226 out of 236 cases (95.7%), cervical or vulvar carcinoma was diagnosed. In 86% phase contrast microscopy allowed immediate diagnosis of the histological type. In only 10 women (4.3%) the first cytological examination was falsely negative. On account of its simplicity and quick applicability, phase contrast microscopy is suitable for examinations in screening clinics. Because the characteristics of malignancy are not always outspoken phase contrast microscopy is an auxiliary method, which must be used only in connection with other methods of examination. It allows observation of the cellular changes during irradiation treatment, as was done in 106 patients. In combination with histochemical and cytochemical methods it makes the changes in living cells visible and thus constitutes a valuable contribution to the study of disturbances due to irradiation.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDT, D.

Present stage and immediate needs of typifying. Constr Buc 14 no. 672:1,3 24 N '62.

1. Arhitect-sef al sectorului de tipizare din I.S.C.A.S.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

IAROVICI, M., candidat in stiinte economice; COSMA, M., ing.; DODU, A., ing.; MACOVEI, M., ing.; GIURCA, Virginia; HARDT, Hedi, ing.

Aspects of the comparative economic efficiency of the main textile technologies. Ind text Rum 15 no.11:573-580 N '64.

1. Institute for Textile Research, Bucharest.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDT, M.

"Electrification of railroads in the USSR."

p. 382 (Electrotehnica) Vol. 5, no. 11, Nov. 1957
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDT, M.
SURNAME, Given Names

Country: Rumania

Academic Degrees: Engineer

Affiliation: -not given-

Source: Bucharest, Stiinta si Tehnica, No 8, Aug 1961, pp 22-23.

Data: "Food Refrigerators."

GPO 981643

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDT, M., ing.

Commercial automats. St si Teh Buc 14 no. 7:42-43 Jl '62.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDT, M., ing.

Improving the performances of ice generators. Ind alim 14 no. 10:416-420 O'63.

1. I.S. "Frigotehnica", Bucuresti.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

MÄGI, Heino; HARDUVA, E., red.

[Ottepaa]Otepää. Tallinn, Eesti Riiklik Kirjastus, 1963. 101 p. [In Estonian] (MIRA 17:6)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

S/190/61/003/001/019/020
B119/B216

AUTHORS: Hardy, D., Spiegel, V., Nytrai, K.

TITLE: Synthesis and polymerization kinetics of the complex vinyl ester of salicylic acid

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 144-149

TEXT: Vinyl salicylate (VS) is of interest as initial material for polymers inasmuch as it possesses both an OH group capable, under certain conditions, of entering into polymeranalogous reaction and a mobile H atom which may possibly intensify the polymerization reaction. In contrast to other authors who obtained 2-methyl-4-keto-1,3-benzodioxane on transesterification of vinyl acetate and salicylic acid, the authors of the present paper obtained VS in 10.4% yield by reducing the reaction time (from 36 to 3.5 hr) and lowering the reaction temperature (to 73-82°C). The data of VS are: boiling point 125°C at 3 mm Hg; nonfreezable in an acetone - dry ice mixture; molecular weight 176 (determined cryoscopically in benzene, theoretical molecular weight 164); MR_D 42.96 (theory 42.87). Further evidence of the

Card 1/3

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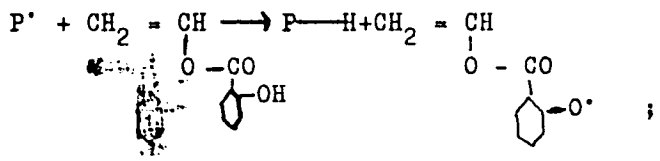
"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

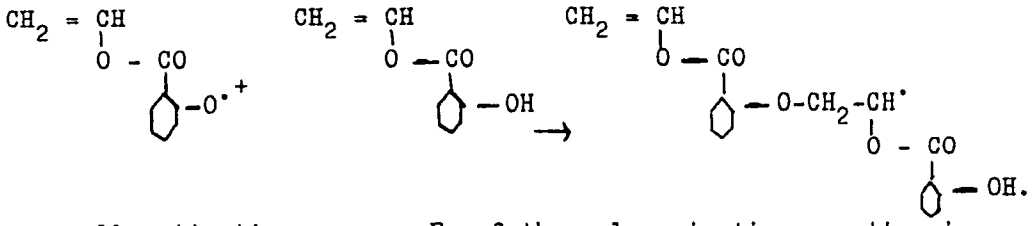
structure of VS was gained from its infrared spectrum (Fig. 1). Azoisobutyronitrile was used as initiator in polymerization tests of VS. The polymerization kinetics were followed dilatometrically (using an ampoule dilatometer with a capacity of 10 ml). The molecular weight of the polymers was determined viscosimetrically (the polymer was hydrolyzed in methanolic NaOH and the polyvinyl alcohol obtained dissolved in water and then measured). Results: The chain transfer constant of the monomeric molecule C_M is $8.0 \cdot 10^{-3}$ at 70°C (C_M for vinyl benzoate, having no OH groups, is $\sim 0.7 \cdot 10^{-3}$ at ~80°C, C_M for vinyl acetate is $-0.15 \cdot 10^{-3}$ at 60°C). Reaction mechanism:



Card 2/3

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6



The overall activation energy, E, of the polymerization reaction is 27.7 kcal/mol. The authors thank D. Varsanyi and S. Golli for their cooperation (infrared spectra). The study presented is a part of the work for a diploma by the second author, April 1956, at the Department of the Technology of Plastics and Rubbers of the Budapest Polytechnic Institute. There are 6 figures, 2 tables, and 11 non-Soviet-bloc references.

ASSOCIATION: Research Institute of Organic- and Plastics Industry, Budapest

SUBMITTED: September 14, 1960

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

S/190/62/004/012/013/015
B101/B186

AUTHORS: Hardy, D., Nitray, K., Fedorova, N., Kovàcs, G.

TITLE: Polymerization of cetyl methacrylate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 12, 1962, 1872-1878

TEXT: Polymers with a vitrification temperature of 20-25°C and an intrinsic viscosity of 1.60-3.45 were obtained in the course of a study of the polymerization kinetics of cetyl methacrylate in the presence of benzoyl peroxide in N_2 atmosphere at 50-80°C. The degree of conversion was a linear function of time. Polymerization ceased at 66% conversion. No region of accelerated polymerization was observed as with other acrylates and methacrylates. The following data are given: constant k_i of the initiation rate, $3.09 \cdot 10^{-6}$; constant k_g of the chain growth, 98 at 30°C; $k_g/k_t^{1/2} = 0.065$ at 30°C, 1.080 at 70°C, where k_t is the constant of chain termination; furthermore, $k_g/k_t^{1/2} = 42.3 \exp(-2500/RT)$.

Card 1/2

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

The gross activation energy of polymerization is 17.8 kcal/mole, $E_g - 0.5\ E_t = 2.4$ kcal/mole (E_g = activation energy of the chain growth, E_t = activation energy of termination). The chain transfer coefficient C_M at 70°C is $1.4 \cdot 10^{-5}$ for the monomer, $9.83 \cdot 10^{-5}$ in the presence of CCl_4, and $20.5 \cdot 10^{-5}$ in the presence of isopropyl benzene. The initiation efficiency f is only 0.14. These low values, as compared with other acrylates and methacrylates, are explained by the high molecular weight and the high viscosity of cetyl methacrylate. There are 4 figures and 4 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut plastmassovoy promyshlennosti Budapest (Scientific Research Institute of the Plastics Industry, Budapest)

SUBMITTED: June 16, 1962

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, Erno, okleveles gepeszmernok; HARDY, Ervin, okleveles gepeszmernok

Economical regulation of condensation temperature of cooling installations. Energia es atom 13 no.4/5:217-219 Ap-My '60.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, Erno, okleveles gepeszmernok; HARDY, Ervin, okleveles gepeszmernok

Economical regulation of condensation temperature of cooling installations. Energia es atom 13 no.4/5:217-219 Ap-My '60.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

Initiation Reactions in the Polymerization of Vinylesters and Investigation of Their Correlation With Acid Radicals--Gy. Hardy and J. Szita (Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest)

Received October 2, 1956
Acta Chimica-Academiae Scientirum Hungaricae
1958, Vol 15, Nr 4, p 339

Distr: 4E3d/4E4j/4E2c(j)

5
2MAY
3

SUMMARY

1. It was found that a correlation exists between the decrease of the absolute value of the rate constant of the initiation reaction and the decrease of acidity of the corresponding fatty acid, measured at the same temperature, in the case of the vinyl esters of aliphatic fatty acids. The value of the appropriate action constants diminished by increasing molecular sizes of substituents, whilst the absolute values of initiation activation energies proved to be identical within the errors of measurement, ranging about 33 000 cal.

2. On the basis of literature data the theoretical and practical limits of the inhibition method were established. It was stated that this method of measurements does not take into consideration the capability of initiators to form radicals and the finer mechanism of the initiation process, either.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, Gy

Distr: 4E2c(j)/4E3d 7 7

Initiation reactions in the polymerization of vinyl esters and investigation of their correlation with acid radicals. 7

Gy. Hardy and J. Szita (Hung. Acad. Sci., Budapest). ~~Acta Chim. Acad. Sci. Hung.~~ 15, 339-50(1958)(in English).

—The behavior of a vinyl polymer in the initiation reaction of a polymerization process should be detd. by the condition of the π-bond of the vinyl group. The validity of this presumption was studied by an investigation of initiation reactions by the inhibition method (Bartlett and Kwart, *C.A.* 44, 5803g), by using azodiisobutyronitrile as the initiator and 2,2-diphenyl-1-picrylhydrazyl as the inhibitor. In the series of the vinyl esters of formic, acetic, propionic, butyric, isobutyric, and isovaleric acids, the trend of the reduction of abs. magnitudes of rate consts. of the initiation reaction at the same temp. was identical to the trend of decrease of the dissocn. consts. of the fatty acids. The initiation activation energies were identical. A different behavior was found with vinyl monochloroacetate and vinyl benzoate. All attempts at radical polymerization of the vinyl furoate failed. Two new vinyl esters were synthesized and had the following properties: furoate, m. 14-14.5°, b. 182-4°, d_{4}^{20} 1.1127, n_D^{20} 1.5060, n_C^{20} 1.5035; isobutyrate, b. 104-5°, d_{4}^{20} 0.8921, n_D^{20} 1.4052. A real initiation rate is detd. by the inhibition method only when the free radical formed on decompn. of the initiator reacts with a monomer mol. Arthur Fleischer

6

2 may

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

Autoinhibition in the radical polymerization of furancarboxylic acid vinyl ester. Gy. Hardy (Hung. Acad. Sci., Budapest). *Acta Chim. Acad. Sci. Hung.* 17, 121–4(1958) (in German).—Mixts. of vinyl acetate and azodiisobutyronitrile with furancarboxylic acid vinyl ester (I) or furancarboxylic acid phenyl ester (II) were polymerized in sealed dilatometers at 60° in the absence of O. Increasing amts. of I and II greatly inhibited the rate of polymerization. M. J. D. Low

Distr: 4E2c(j)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

45. **Investigation of the effect of vinyl furoate and some derivatives on polymerization processes of radical mechanism.** Gy. Hardy, D. Dávid, K. Nyitrai, H. Feuer. *Magyar Kémiai Folyóirat*, Vol. 64, 1958, No. 7—8, pp. 284—286, 8 figs.

The investigation showed that furan derivatives have a strong retarding influence on the radical type polymerization of vinyl acetate, since the furan ring reacts with the initiating free radical. Kinetic measurements of polymerization indicate a double chain-transfer inhibition mechanism. First the vinyl ester of tetrahydrofurancarboxylic acid was synthesized and polymerized. In the case of tetrahydrofuran derivatives no retarding effect on the radical polymerization of vinyl acetate was observed. As a consequence it follows that the lack of the radical polymerization of vinyl furoate is explained by the fact that the furan ring of the monomer molecule reacts with the initiating free radicals and thus an autoinhibition of the radical polymerization occurs. This is a rare case of autoinhibition, a similar phenomenon being observed only in the reactions of free radicals with allyl compounds or some olefines (octene-1, propylene, isobutylene).

7
4E3d
4E2c
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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

7
2 may
3

Distr: 4E3c/4E3d/4E2c(j)

Use of ionization radiation in plastics industry. Gyula Hardy, and János Dobó (Research Inst. Organic Chem. and Plastics Ind., Budapest, Hung.). *Chem. průmysl* 9, 315-18 (1959).—X-radiation (2.5×10^4 r./hr.) was used for block polymerization of $CH_2:CHCl$, the resulting poly(vinyl chloride) (I) being free from initiators and emulsifying agents. Since the rate of initiation is insensitive to temp., the rate of polymerization is little varied with temp. (20%/2.5 hr. at 0°; 22%/2.5 hr. at −78°). With respect to decreased transfer reactions, the mol. wt. is very high (K-value 80.5-89) and the stability of I is the same as for unstabilized emulsion or suspension I. Simultaneous degradation and cross-linking are lowered with decreasing intensities of radiation in the presence of stabilizers and by removing the resulting polymer from radiation. Ion-exchange membranes were prepd. by grafting films (0.06 mm.) from I, polyethylene (II), and polytetrafluoroethylene with styrene (III), divinylbenzene, $CH_2:CH.O.CO.CH_2Cl$, and acrylic acid. Ionizing radiation (4×10^4 r/hr.) is used in the absence of O. Homogeneous products were obtained when the monomer was capable of swelling the carrier (I + III, and II + III). Increasing amts. of grafted III on II increased the strength and decreased the elongation of the materials obtained. Telomerization of vinyl acetate (IV) with CCl_4 was studied; the yield of the monoaddn. product depended on the ratio IV/CCl_4 and on the doses of radiation used. J. Sebenda

pmt. JJ

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

COUNTRY : Hungary
CATEGORY : H-29

ABS. JOUR. : RZKhim., No. 1959, No. 88412

AUTHOR : Hardy, G.
INST. :
TITLE : Development of the Plastics Industry in Hungary

ORIG. PUB. : Magyar kem. lapja, 1959, 13, No 7-8, 268-270

ABSTRACT : Development trends of the Hungarian industry of plastics are considered. -- L. Pesin

CARD:

261

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, GY.

Research on plastic materials at the Research Institute of Organic Chemical Industry and Plastic Materials Industry. p. 67.

MAGYAR KEMIKUSOK LAPJA. (Magyar Kemikusok Egyesulete) Budapest, Hungary
Vol. 14, no. 2/3, Feb./Mar. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

Distr: 4E2c(j)

170/60. 66.095.26

Investigation of radical polymerization processes in the presence of alien substances, I. Effect of organic halogen compounds on the polymerization of vinyl acetate. (In Russian) A. Wahnscheidt, Gy. Hardy. *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 20, 1959, No. 3, pp. 261—272, 5 figs., 6 tabs.

The chain transfer constants of 30 different organic halogen compounds were determined by the authors at 70° C in the polymerization of vinyl acetate promoted by benzoyl peroxide. Of the examined 30 organic halogen compounds, halogen hydrocarbons possessing halogen-carbon bonds of low binding energy, *e. g.* bromoform, tetrabromomethane, monobromo-trichloromethane, proved to be the most active. Furthermore, the authors established the correlations in the various groups of compounds (halogen derivatives of methane, ethane, ethylene, aliphatic and aromatic halogen derivatives, oxygen-bearing halogen derivatives) between the structure of organic substances and the chain transfer activity observed in the radical polymerization of vinyl acetate.

4
1,9,9(NB)
1,Bw(Bw)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

Distr: 4E2c(j)

171/60. 66.095.26

Investigation of radical polymerization processes in the presence of alien substances. II. Effect of hydrocarbons, alcohols, aldehydes, ketones, esters and acids on the polymerization of vinyl acetate. (In Russian) A. Wahnschaidt, Gy. Hardy. *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 20, 1959, No. 4, pp. 381—391, 5 figs., 5 tabs.

The chain transfer constants of 33 different organic compounds not containing halogens were determined by the authors at 70° C in the polymerization of vinyl acetate promoted with benzoyl peroxide. Of the examined 33 different organic compounds not containing halogens, some substances containing extremely labile hydrogen atoms — *e. g.* 9-phenyl fluorene, benzyl mercaptan and dimedon — proved to be the most active. Furthermore, the authors established the correlations in the various groups of compounds (hydrocarbons, alcohols, aldehydes, ketones, esters and acids) between the structure of organic compounds and their chain transfer activity in the radical polymerization of vinyl acetate. In the same compounds the maximum absolute values of the observed chain transfer constants appeared in vinyl acetate, while the minimum values were found in styrene. No changes could be observed in the sequence of chain transfer activity of the various monomers.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

DOBO, Janos; HARDY, Gyula, a kemiai tudomanyok kandidatusa

Some problems relating to radiation polymerization. Kem tud kozl MTA 14 no.3:330-336 '60. (EEAI 10:9)

1. Szerves Vegyipari es Muanyagipari Kutato Intezet, Budapest.

(Radiation) (Polymers and polymerization)
(Ethylene) (Ion exchange) (Chloroethylene)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, Gyula

Data on telomerization reactions. Magy kem lap 15 no.7:307-314 Jl '60.

1. Szerves Vegyipari es Muanyagipari Kutato Intezet, es "Magyar Kemikusok Lapja" szerkeszto bizottsagi tagja.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

KORANYI, Gyorgy, dr.; GYULAY, Zoltan, egyetemi tanar; DIOSZEGHY, Daniel, egyetemi tanar; WAHLNER, Aladar, fomernok; VAMOS, Endre, kandidatus; NYUL, Gyula, kandidatus; FREUND, Mihaly, dr., akademikus; [redacted] [redacted]lemer, akademikus; TAKACS, Pal, dr., kandidatus; SCHLATTNER, Jeno, kandidatus; HARDY, Gyula, a kemiai tudomanyok kandidatusa

Report on the 1959-60 work of the Committee on Petroleum and Coal Processing, Hungarian Academy of Sciences. Kem tud kozl MTA 16 no.3: 349-359 '61.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

H/006/62/000/002/001/002
D249/D303

AUTHOR: Hardy, Gyula

TITLE: The chemical effects of high energy radiation; prospects of its application in the industry

PERIODICAL: Magyar kémikusok lapja, no. 2, 1962, 52-61

TEXT: A short review of the application of radiochemical techniques in the chemical industry, based on Soviet and Western work. A brief description is given of radiations and of the main types of radiation sources. Radiochemical techniques finding extensive application in the plastics industry are described and discussed under: (1) Polymerization in the solid phase as a technique for preparing stereospecific polymers. Examples of radiochemical polymerization in the liquid and gas phased are mentioned. (2) Transformation of polymers, e.g. radiochemical chlorination, sulphochlorination and sulphoxidation. (3) Radiochemical grafting. (4) Cross-linking of polymers. Since this can be achieved by irradiating finished products (e.g. foils, plates, tubes) it is a field of application which

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has been studied most extensively by the industry. (5) Radiochemical vulcanization. The introduction of radiochemical techniques into the petroleum processing industry is thought to promise considerable savings, expecially when processing a large volumes of materials. Reference is made to studies of the radiochemical cracking process made by Topscief and co-workers (Ref. 20: Lecture at the Conference on the Application of the Sources of High Energy Radiation in Industry. Warsaw, 8-12 September 1959), who concluded that above 230°C radiochemical-thermal cracking was a chain reaction. The composition of the products is identical with those of the thermal cracking while the yield is much larger. Further potential application in the petroleum industry is the de-sulphurization of petroleum products. Radiochemical techniques in the synthetic organic and inorganic chemical industries are briefly reviewed. The lines of application indicated are preparation of nitric acid, hydrazine, sulphuric acid, hexachlorohexane, phenol plus telomerization reactions. Finally, the further technical and economic problems of industrial application are listed. These are: (1) Inadequate utilization of the energy of radiation sources. (2) Production of homogeneous fields of radiation

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in large volumes. (3) Finding sensitizers to reduce the duration of irradiation required by some reactions. Finding methods to increase the selectivity of the radiochemical reactions. (4) Finding the optimum conditions for the radiochemical reactions requiring large amounts of energy. (5) Removal of the products of the reactions from the field of radiation before changes start due to a further amount of undesired radiation. There are 5 figures and 29 references: 14 Soviet-bloc and 15 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: S.H. Pinner, British Plastics, 34, 30, (1961); Charlesby and Arnim: J. Polym. Sci., 26, 151, (1957); H.A. Dewhurst: J. Chem. Phys. 24, 1254, (1956); McBee, Roberts and Puerckhauer: J.Am.Chem.Soc., 79, 2329, (1957).

ASSOCIATION: Müanyagipari Kutató Intézet (Industrial Plastics Research Institute)

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1. Chair of Plastics and Rubber, Technical University, Budapest, XI., Budafoki ut 4-6. 2. Editorial board member, "Acta Chimica Academiae Scientiarum Hungaricae" (for Hardy).

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Synthesis, polymerization and copolymerization of vinyl-thioacetate. Magy kem folyoir 70 no. 4:174-179 Ap '64.

1. Research Institute of the Plastics Industry, Budapest and Department of the Plastics and Rubber Industries, Budapest University of Technical Sciences.

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HARDY, Gyula; VARGA, Jozsef

Investigations in the field of the solid phase radiant polymerization. Pt. 4. Magy kem folyoir 70 no. 6:258-264 Je '64.

1. Chair of Plastics and Rubber Industry, Budapest Technical University.

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY Gyula

Selective elatrolytic reduction of aromatic compounds. Magy kem lap 20 no.2:65 F '65.

New instrument for measuring molecular weight. Ibid.:65

1. Editorial Board Member, "Magyar Kemikusok Lapja."

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, Gyula

New reactions with carbon monoxide. Magy kem lap 20 no.2:82 F '65.

1. Editorial Board Member, "Magyar Kemikusok Lapja."

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

HARDY, Gyula

Direct transformation of hydrochloric acid to hydrogen and chlorine. Magy kem lap 20 no.3:118 Mr '65.

1. Editorial Board Member, "Magyar Kemikusok Lapja."

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HARDY, Gyula

The new fluidization limekiln built by the American Pfizer firm. Magy kem lap 20 no.4:182 Ap '65.

Our plastics industry and chemical fibers industry in the last 20 years. Ibid.:197-200

1. Research Institute of Plastics Industry, Budapest, and Editorial Board Member, "Magyar Kemikusok Lapja."

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

L 17684-66 EWP(j)/T WW/RM

ACC NR: AT6009218 SOURCE CODE: HU/2502/65/043/002/0121/0128

AUTHOR: Hardy, Gyula--Khardi, D'. (Doctor; Budapest); Nyitray, Karoly--Nitrai, K. (Budapest); Kovacs, Gabor--Kovach, G. (Budapest); Fedorova, Natalia (Budapest)

ORG: Research Institute for the Plastics Industry, Budapest

TITLE: Investigations in the field of radiation-induced solid-state polymerization. Part 1: Cetyl methacrylate

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 43, no. 2, 1965, 121-128

TOPIC TAGS: polymerization, radiation polymerization, cobalt, polymerization rate, polymerization kinetics, polymerization degree

ABSTRACT: The kinetics of the polymerization of cetyl methacrylate was investigated in the solid state under irradiation from Co-60 within the -195° to +60°C temperature range. Owing to an increased degree of molecular mobility, the polymerization rate significantly increased at temperatures near the melting point. There was evidence of solid-state phase transformation at around -16°C. Although radical inhibitors were found to be effective, the polymerization reaction was considered to be of the anionic nature. The polymerization degree was shown to be a function of cetyl methacrylate concentration. Orig. art. has: 8 figures and 1 formula. [JPRS]

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

L 39548-66 EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) WW/GD/GG/RM

ACC NR: AP6008586 SOURCE CODE: HU/0005/65/071/002/0091/0091

AUTHOR: Hardy, Gyula; Nagy, Lajos

ORG: Research Institute for the Plastics Industry, Budapest (Muanyagipari Kutato Intezet)

TITLE: Solid-state radiation-copolymerization of acrylic amide and acrylic acid

SOURCE: Magyar kemiai folyoirat, v. 71, no. 2, 1965, 91

TOPIC TAGS: copolymerization, radiation polymerization, solid state, amide, aliphatic carboxylic acid

ABSTRACT: The solid system of acrylic amide and acrylic acid has a phase-diagram with two eutectic points, and a molecular compound of 1:2 molar ration is present which has the highest melting point. The rate of copolymerization is the greatest in the eutectic points, and goes through a minimum at the composition corresponding to the molecular compound. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 13Nov64 / ORIG REF: 001

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

L 17000-66 EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) WW/GG/

ACC NR: AP6008605 SOURCE CODE: HU/0005/65/071/004/0171/0175

AUTHOR: Hardy, Gyula; Varga, Jozsef; Nagy, Gabor

ORG: Department of Plastics and Rubber Industry, Technical University, Budapest (Muszaki Egyetem Muanyages Gumiipari Tanszeke)

TITLE: Studies in the field of solid-state radiation polymerization. Part 5: Solid-state copolymerization of N-vinylsuccinimide and N-vinylpyrrolidone (copolymerization in solid and supercooled eutectics)

SOURCE: Magyar kemiai folyoirat, v. 71, no. 4, 1965, 171-175

TOPIC TAGS: copolymerization, solid state, radiation polymerization, supercooling, heterocyclic base compound

ABSTRACT: The eutectic mixture of the ingredients studied is 3.4 imide: 6.6 pyrrolidone. Copolymerization progressed at maximum rate with the components in this ratio and at a higher rate in a supercooled eutectic than in a solid eutectic. The theoretical and experimental aspects of the polymerization, and the characteristics of the copolymers, were described in detail. Orig. art. has: 10 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 24Jul64 / ORIG REF: 005 / OTH REF: 011
SOV REF: 001

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

L 17001-66 EPF(n)-2/EWP(j)/T/ EWA(h)/EWA(1) GG/RM

ACC NR: AP6008606 SOURCE CODE: HU/0005/65/071/004/0175/0178

AUTHOR: Hardy, Gyula; Nyitrai, Karoly; Varga, Jozsef; Patko, Marton

ORG: Research Institute for the Plastics Industry, Budapest (Muanyagipari Kutato Intezet); Department of Plastics and Rubber Industry, Technical University, Budapest (Muszaki Egyetem Muanyag- es Gumiipari Tanszeke)

TITLE: Studies in the field of solid-state radiation polymerization. Part 6: Gamma-radiation-induced solid-state polymerization of vinyl laurate

SOURCE: Magyar kemiai folyoirat, v. 71, no. 4, 1965, 175-178

TOPIC TAGS: solid state, radiation polymerization, gamma radiation, monomer

ABSTRACT: Maximum polymerization rate was observed when the monomer's temperature was near the melting point, + 3°C. The mobility of the molecules of vinyl laurate at this temperature was considered to be relatively high. The polymerization reaction was investigated under various operational parameters and in the presence of various compounds. The results were presented and discussed in detail. Orig. art. has: 9 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 07Aug64 / ORIG REF: 001 / OTH REF: 004

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910010-6

L 01195-66 EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(c)/EWA(1) GG/RM
~~ACCESSION~~ NR: AP5025814 HU/0005/65/071/006/0251/0254

AUTHOR: Hardy, Gyula; Varga, Jozsef

TITLE: Studies in the field of solid-state radiation polymerization. Part 7: Effect of polymer formation on the kinetics of solid-phase polymerization

SOURCE: Magyar kemiai folyoirat, v. 71, no. 6, 1965, 251-254

TOPIC TAGS: radiation polymerization, polymerization kinetics, polymer, solid state, monomer

ABSTRACT: [Authors' English summary, modified] The effect of the formed polymer was studied in monomer-polymer systems during radiation-induced solid-state polymerization, on the kinetics of the solid-state polymerization of N-vinylsuccinimide. The formed polymer accelerated the polymerization, owing to deformations in the crystal lattice (partly decomposed crystal structure) and by the increased mobility of the monomer molecules caused by the polymer formed. This effect is likely to occur in the case of monomers that are of accelerating character in solid-state polymerization. The reverse effect is likely to occur in the case of monomers that are of decelerating character. Orig. art. has: 3 graphs, 1 table.

Card 1/2

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