"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MANVELYAN, M.G.; KOSTANYAN, K.A.; MARGARYAN, A.A.

"Erevanit" as a material for glass melting. Behavior of "erevanit" on heating. Izv. AN Arm.SSR. Khim.nauki. 16 no.3:291-295 '63. (MIRA 17:2)

1. Institut khimii Soveta narodnogo khozyaystva Armyanskoy SSR.

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SHISHENINA, Ye.P.; Prinimali uchastiye: GERASIMOVICH, L.N., starshiy laborant; MARGARITTO, M.S., starshiy laborant

Characteristics of the Tertiary acid bitumin'ferous components of the Krasnodar Territory. Trudy VNIGNI no.33:234-262 '62. (MIRA 18:12)

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L 27306-66

ACC NR: AP6008982

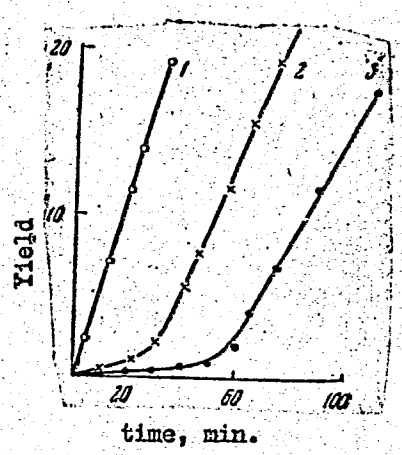

Fig. 1. Polymerization of methylmethacrylate under the influence of the initiating system benzoyl peroxide--cetylpyridinium chloride for different monomer concentrations. Benzoyl peroxide concentration = cetylpyridinium chloride concentration = 0.0745 mole/liter, T - 20C, pH ~ 10.3. Ratio of organic to aqueous phase: 1 - 1:1; 2 - 1:2; 3 - 1:4.

the reaction products resulting from the reaction of benzoyl peroxide and dimethylaniline (chiefly, monomethyl aniline). Orig. art. has: 1 table and 5 graphs.

SUB CODE: 07, 11/SUBM DATE: 26Dec64/ ORIG REF: 006/ OTH REF: 002

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

L 27306-66 EWT(m)/EWP(j)/T IJP(c) WW/RM SOURCE CODE: UR/0190/65/007/011/1973/1977

ACC NR: AP6008982 (A)

AUTHORS: Trubitsyna, S. N.; Margaritova, M. F.; Medvedev, S. S.

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Emulsion polymerization of methylmethacrylate in the presence of benzoyl peroxide at low temperatures

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1973-1977

TOPIC TAGS: emulsion polymerization, polymerization kinetics, methylmethacrylate

ABSTRACT: This investigation was performed to extend an earlier work of M. F. Margaritova and S. D. Yevstratova (Vysokomolek. soyed., 3, 390, 1961). It was desired to determine the effect of initiator and emulsifier system concentration, pH of the medium, and the temperature on the emulsion polymerization of methylmethacrylate. The initiator systems used were benzoyl peroxide--dimethyl aniline and benzoyl peroxide--cetylpyridinium chloride. The latter also served as the emulsifying agent. The experimental results are presented in graphs and tables (see Fig. 1). Rate expressions for the polymerization reactions have been derived. A comparison of the molecular weights of the polymers obtained from the two different initiating systems showed that dimethylaniline decreases the molecular weight by two orders of magnitude. It is concluded that the decrease in molecular weight is caused by the inhibiting action of

UDC: 66.095.26+678.744

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L 27305-66

ACC NR: AP6008981

The order of the initiation reaction for each component and the activation energy for the reaction were determined. The inhibiting effect of benzoic acid on the decomposition of benzoyl peroxide and the polymerization of the monomers was established. It is suggested that a chemical interaction takes place between benzoyl peroxide and acryl pyridiniums in alkali media. Orig. art. has: 1 table and 4 graphs.

SUB CODE: 11/ SUBM DATE: 26Dec64/ ORIG REF: 003/ OTH REF: 001

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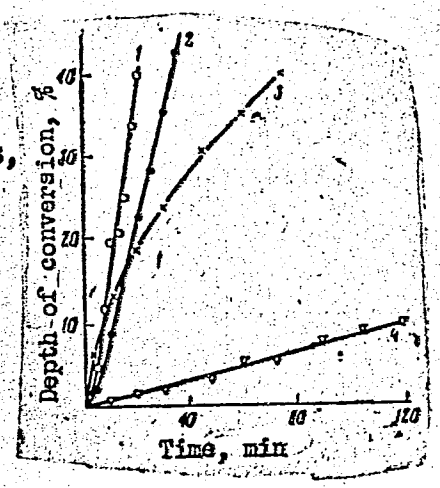
"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

L 27305-66

ACC NR: AP6008981

methacrylate, styrene, chloroprene, isoprene, butadiene) in the presence of benzoyl peroxide—cetylpyridinium chloride was also studied. It was found that acrylonitrile and methylacrylate did not polymerize under these conditions. The experimental results are presented graphically (see Fig. 1).

Fig. 1. Polymerization of monomers in the presence of the system—benzoyl peroxide-cetylpyridinium chloride: benzoyl peroxide = 0.745 mole/liter, cetylpyridinium chloride = 2%, pH ~ 10.3, T = 20C. 1—chloroprene, 2—methylmethacrylate, 3—styrene, 4—isoprene.



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L 27305-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6008981 (A) SOURCE CODE: UR/0190/65/007/011/1968/1972

39
34

AUTHORS: Trubitsyna, S. N.; Margaritova, M. F.; Medvedev, S. S.

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

B

TITLE: Investigation of polymerization initiation by the system benzoyl peroxide-alkylpyridinium in alkali media

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1968-1972

TOPIC TAGS: radical polymerization, emulsion polymerization, chloroprene, benzoyl peroxide, monomer, vinyl, chloroprene, isoprene, butadiene, polymer

ABSTRACT: This investigation was conducted to extend earlier published work by M. F. Margaritova and S. D. Yevstratova (Vysokomolek. soyed., 3, 398, 1961) and to study the role played by cetylpyridinium chloride and cetylpyridinium bromide in initiation of polymerization. The study was carried out by observing the rate of benzoyl peroxide decomposition in the presence of alkylpyridiniums in benzene-water emulsions at 20—22C. The experimental results are presented in graphs and tables. The polymerization of a number of vinyl and diene monomers (methyl-

Card 1/3 UDC: 66.095.26

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

STAVROVA, D.S.; MARGARITOVA, M.F.; MEDVEDEV, S.S.; Prinimala uchastiye GOL'SHTEYN, S.B.

Emulsion polymerization kinetics of methyl methacrylate in the presence of organic acids and amines and an anion-active emulsifier. Vysokom. soed. 7 no.4:725-728 Ap '65. (MIRA 18:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

STAVROVA, S.D.; MARGARITOVA, M.F.; [illegible], S.S.

Emulsion polymerization kinetics of methyl methacrylate in the presence of organic acids and amines and a cation-active emulsifier. Vysokom. soed. 7 no.4:717-724 Ap '65. (MIRA 18:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

STAVROVA, S.D.; PEREGUDOV, G.V.; MARGARITOVA, M.F.

Mechanism of interaction between benzoyl peroxide and dimethylaniline as studied by spectral methods. Dokl. AN SSSR 157 no.3: 636-638 Jl '64. (MIRA 17:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova. Predstavleno akademikom S.S. Medvedevym.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

ACCESSION NR: AP4023496

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Insitute of Technology of Fine Chemicals)

SUBMITTED: 05Jul63 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: GC, OC NO REF SOV: 002 OTHER: 002

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ACCESSION NR: AP4023496

emulsifier concentrations in the aqueous phase and for the polymerization rates. The process, which proceeded essentially at a constant rate after initial growth up to 2.3 g/100 ml emulsifier concentration, differs considerably from that observed with ionic emulsifiers. This difference consists mainly in the average diameter of the latex particles which is larger by one order of magnitude and does not depend upon the polymerization degree nor the concentration of the emulsifier. The average molecular weight of the forming polystyrene increased with an increase in the degree of polymerization degree, in contrast to reactions with ionic emulsifiers, indicating possible intraparticle polymerization. The polymerization rate depended upon the initiator concentration only at concentrations of up to 0.225 g/1000 milliliter of the aqueous phase; this limit is higher with ionic emulsifiers. Initiation proceeded with participation of the emulsifier in the surface layers of the latex particles. The number of stable latex particles, thus also the rate of polymerization, were shown to depend upon the ratio monomer/emulsifier (aqueus) phase, which dependency is also absent with ionic emulsifiers. The overall activation energy of polymerization was 19.8 kcal/mole. The theoretical results agreed satisfactorily with experimental data. Orig. art. has: 4 figures and 5 formulas.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

ACCESSION NR: AP4023496 S/0069/64/026/002/0168/0173

AUTHOR: Gritskova, I. A.; Medvedev, S. S.; Margaritova, M. F.

TITLE: Polymerization of styrene in the presence of non-ionic emulsifiers. 1. Polymerization of styrene in the presence of the emulsifier OS-20

SOURCE: Kolloidny*y zhurnal, v. 26, no. 2, 1964, 168-173

TOPIC TAGS: styrene polymerization, polymerization initiator, azobisisobutyronitrile, emulsifier influence, ethyleneoxide hydrocarbon mixture, polymerization rate, polymerization rate dependency, ionic emulsifier, anionic emulsifier, latex particle, polymer chain formation, hydrocarbon phase, aqueous phase, none ionic emulsifier

ABSTRACT: This emulsifier is the reaction product of 20 moles of ethylene oxide with a mixture of higher fatty acid alcohols of the general formula $R - O(CH_2-CH_2O)_nH$ where R is the alkyl groups containing 16-18 carbon atoms, n an average of 20. The preparation of styrene, the initiator azobisisobutyronitrile, experimental equipment and procedures are described. The polymerization rate was determined with a dilatometer. The results are figured and tabulated for various

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

GRITSKOVA, I.A.; MEDVEDEV, S.S.; MARGARITOVA, M.F.

Polymerization of styrene in the presence of nonionogenic emulsilfying agents. Part 1: Polymerization of styrene in the presence of the emulsifier OS-20. Koll.zhur. 26 no.2:168-173 Mr-Ap '64. (MIRA 17:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

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CHERNIKHOV, A.Ya.; MARGARITOVA, M.F.

Emulsion polymerization in the presence of sulfonated polystyrene.
Vysokom.soed. 6 no.2:227-230 F '64. (MIRA 17:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

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YEVSTRATOVA, S.D.; MARGARITOVA, M.F.; MEDVEDEV, S.S.

Emulsion polymerization of vinyl compounds in the presence of organic acids and amines. Vysokom. soed. 5 no.10:1574-1579 O '63. (MIRA 17:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

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soluble initiators, $w = kc_{em}c_{in}^{n}$ where $0.5 > n > 0.25$, and using oil-soluble initiators (benzoyl peroxide and azoisobutyric dinitrile) $w = kc_{em}c_{in}^{0.5}$. This different behavior of vinylidene chloride is caused by weaker adhesion of the emulsifier to the polymer particles. There are 5 figures.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

SUBMITTED: September 22, 1961

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

S/190/63/005/004/010/020
B101/B220

AUTHORS: Krishan, T., Margaritova, M. F., Medvedev, S. S.

TITLE: Regularities of emulsion polymerization. II. Polymerization of chloroprene and vinylidene chloride

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 542-546

TEXT: The study refers to the polymerization of chloroprene and vinylidene chloride, emulsified with MK(MK) emulsifier (sodium salt of sulfonic acids of paraffin hydrocarbons) or sodium laurate, after initiation with benzoyl peroxide, potassium persulfate, hydrogen peroxide, sodium perborate or azoisobutyric dinitrile. The polymerization rate w (g polymer per 100 ml·hr) was determined. Data found for chloroprene: (1) In the presence of MK and potassium persulfate $w = kc_{em}c_{in}^{0.5}$, where c_{em} is the concentration of the emulsifier and c_{in} the concentration of the initiator; (2) In the presence of benzoyl peroxide, however, w passes through a maximum with $c_{in} \sim 0.05$ g/100 ml of the aqueous phase whatever the emulsifier used. For vinylidene chloride it was found that, using water-

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ation processes. (5) Thus, $w = kc_{em}^{0.5}c_{in}^{0.5}$ for MK; $w = kc_{em}c_{in}^{0.5}$ for sodium laurate. (6) According to E. Willson et al. (J. Phys. Colloid Chem., 53, 357, 1949) and S. Maron et al. (J. Colloid Sci., 9, 89, 104, 347, 1954) the average number and surface of the polymer particles were determined at 50°C, c_{em} = 2 - 7.5 g/100 ml; c_{in} = 0.0125 - 0.025 g/100 ml and it was found that: (a) with given c_{em} and c_{in} the total surface is independent of the degree of polymerization and the ratio water-to-organic phase; (b) with increasing c_{em} the diameter of the polymer particles decreases and their number increases. Conclusion: Polymerization takes place in the surface layer of the emulsifier adsorbed on the surface of the polymer particles. There are 8 figures and 2 tables.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

SUBMITTED: September 22, 1961

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

S/190/63/005/004/009/020
B101/B220

AUTHORS: Krishan, T., Margaritova, M. F., Medvedev, S. S.

TITLE: Regularities of emulsion polymerization. I. Polymerization of methyl methacrylate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 535-541

TEXT: The study refers to the polymerization of methyl methacrylate at 40 - 55°C, emulsified with MK(MK) emulsifier (sodium salt of the sulfonic acids of paraffin hydrocarbons) or sodium laurate, initiated with benzoyl peroxide or potassium persulfate. Results: (1) In the presence of MK and benzoyl peroxide the polymerization rate w is proportional to the concentration of the emulsifier up to $c_{em} \leqslant 4$ g/100 ml. With higher c_{em}, w depends no longer on c_{em}. (2) In the presence of sodium laurate and benzoyl peroxide $w = kc_{em}$. (3) With MK and potassium persulfate $w = kc_{em}^{0.5}$. With $c_{em} > 2$ g/100 ml, w becomes almost constant. (4) The reaction rate w is proportional to the square root of the initiator concentration c_{in}; with $c_{in} > 0.1$ g/100 ml, w becomes independent of c_{in} owing to termin-

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGARITOVA, M.F.; MUSABEKOVA, I.Yu.

Interaction of benzoyl peroxide and triethylamine, and polymerization in the presence of this system. Vysokom.soed. 3 no.4:530-535 Ap '61. (MIRA 14:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.
(Benzoyl peroxide) (Triethylamine) (Polymerization)

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MARGARITOVA, M.F.; YEVSTRATOVA, S.D.

Polymerization of methylmethacrylate in the presence of the organic acid - dimethylaniline system. Part 2. Vysokom.soed. 3 no.3:398-401 Mr '61. (MIRA 14:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.
(Methacrylic acid) (Polymerization)

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Polymerization of methyl...

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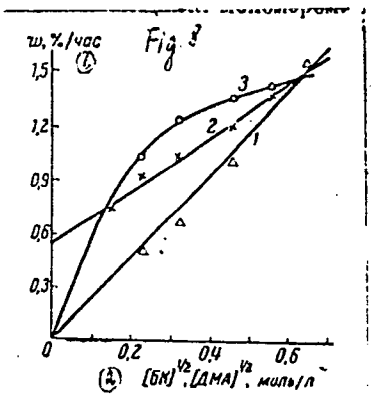
B101/B204



Legend to Fig. 8:
1) [BA] = [DMA] = 0.3 mole/l; 2) [DMA] = 0.3 mole/l; 3) [BA] = 0.3 mole/l; a) $[BA]^{1/2}$, $[DMA]^{1/2}$ mole/l; b) %/hr.

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Polymerization of methyl...

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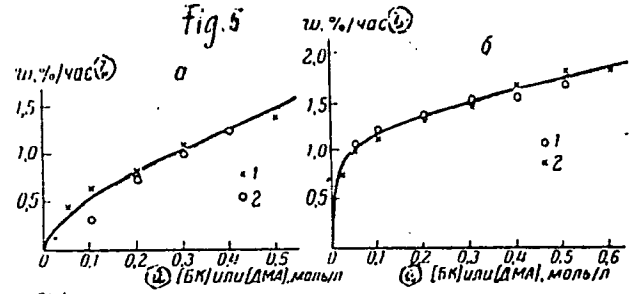
Fig.5



Legend to Fig. 5a: × 1) [BA] = 0.2 mole/l = const; o 2) DMA = 0.2 mole/l = const; a) [BA] or [DMA] mole/l, b) %/hr.
Legend to Fig. 5б : o 1) [BA] = 0.3 mole/l = const; × 2) [DMA] = 0.3 mole/l = const.

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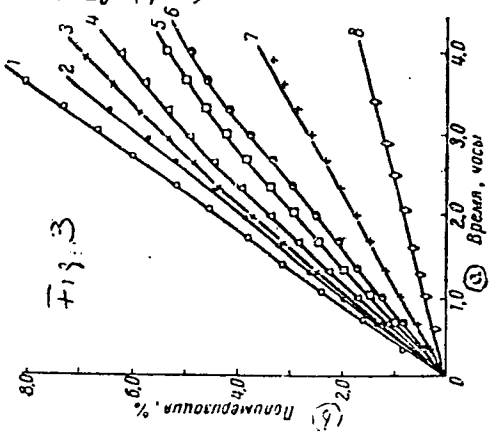
89900

Polymerization of methyl... S/190/61/003/003/003/014
B101/F-04

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova
(Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

SUBMITTED: July 7, 1960



Legend to Fig. 3: a) time, hr; b) polymerization; 1) [BA] - [DMA] = 0.6; 2) 0.5; 3) 0.4; 4) 0.3; 5) 0.2; 6) 0.1; 7) 0.05 mole/l; 8) thermal polymerization.

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Polymerization of methyl... S/190/61/003/003/003/014
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$$-\overset{|}{\underset{|}{N}}\overset{+}{\cdot}\overset{-}{OH} + HOCOR \rightarrow -\underbrace{\overset{|}{\underset{|}{N}}\overset{+}{\cdot}\overset{-}{O}COR}_{\downarrow} + H_2O$$

(B)

$$-\overset{|}{\underset{|}{N}}: + \dot{O}COR \xrightarrow{CH_2=CHR'} RCO\dot{O}CH_2-\dot{C}HR'$$

and the relation $w_{tot} = k_2[BA]^{1/2} + k_3([BA] - [DMA])^{1/2}$ (3) holds. With decreasing difference between [BA] and [DMA], w approaches the value holding for [BA] = [DMA]. Fig. 8 shows the experimental data which are in fair agreement with the above equations. Mention is made of a paper written by Rodionov and V. N. Setkina (Ref. 4: Doctoral dissertation, IOKh AN SSSR (Institute of Organic Chemistry, AS USSR) 1952). There are 8 figures, 2 tables, and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. Of the 2 references to English-language publications one is given in the text of the abstract, the other reads as follows: U. Ryoichi, Bull. Chem. Soc., Japan 31, 685, 1958.

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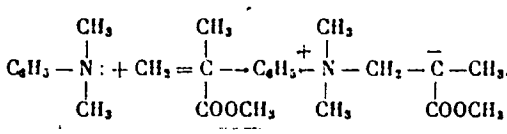
decomposes into free radicals. This reaction proceeds stepwise: $-\dot{\underset{|}{N}}: + HOCOR \rightleftharpoons -\overset{+}{\underset{|}{N}}-\overset{-}{C}OROH \rightleftharpoons -\overset{+}{\underset{|}{N}}\overset{-}{O}H + \dot{C}OR$. The rate constant in this case, as calculated according to Eq. (1), was 0.0382. B) $[DMA] > [BA]$. Beside the reaction initiated by the combined system, a second process, initiated by DMA only, takes place. The authors write for the total reaction rate $w_{tot} = w_1 + w_2 = k_1([DMA] - [BA]) + k_2[BA]^{1/2}$ (2). w_1 stands for the reaction rate with DMA only, w_2 for that with DMA and BA. The reaction between DMA and MMA proceeds according to the scheme A:



C) $[BA] > [DMA]$. In this case, a reaction according to scheme B occurs:

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DMA and BA the rate w of polymerization was observed to increase with the concentration of initiators (Fig. 3). The order of the reaction was 0.5 in which case the equation

$$w = k[BA]^{1/2} = k[DMA]^{1/2} \quad (1) \text{ holds.}$$

An activation energy of 13.2 ± 0.5 kcal/mole followed from experiments with 0.3 mole/l of both BA and DMA at 50, 60, 70, and 80°C. 2) Constant concentration of the one initiator and rising concentration of the other (Fig. 5) also accelerated the rate of polymerization. 3) When another organic acid (monochloroacetic acid, acetic acid, trichloroacetic acid) was used instead of BA, w would increase with rising dissociation constant of the acid. With trichloro-acetic acid, however, after a rapid start polymerization soon slowed down. 4) The copolymerization of MMA with styrene initiated by an equimolar mixture of DMA and BA was studied. The results agree with data obtained by R. Dannley, E. Kay (Ref. 3: J. Amer. Chem. Soc., 77, 1046, 1955). The reaction is governed by a radical mechanism. The authors found the following relationships between the reaction mechanism and the ratio of the initiators: A) Equal concentration [BA] = [DMA]. The initiators form an active complex which

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S/190/61/003/003/003/014
B101/B204

15 8105

AUTHORS: Margaritova, M. F., Yevstratova, S. D.

TITLE: Polymerization of methyl methacrylate in the presence of a system of organic acid - dimethyl aniline. I

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 3, 1961, 390-397

TEXT: A paper by Yü ch'iao (Ref. 1: Thesis, MITKhT im. Lomonosova, 1958 (Moscow Institute of Fine Chemical Technology imeni Lomonosov)) showed that polymerization with amines may be initiated also when organic acids (instead of peroxides) are present. It was the aim of the present investigation to study the mechanism of the reaction between dimethyl aniline (DMA) and an organic acid during the polymerization of methyl methacrylate (MMA). Previous experiments showed that light has an effect upon the process. In this paper, the authors therefore present results obtained by polymerization in the dark. The organic acid used was benzoic acid (BA). The kinetics of polymerization was examined dilatometrically. Polymerization took place at 70°C. 1) In the case of an equimolar ratio between

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87430

Synthetic Thermosetting Resins on the Basis of Low-molecular Liquid Butadiene - Styrene Copolymers

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3 Soviet, 6 US, and 1 British.

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Synthetic Thermosetting Resins on the Basis of Low-molecular Liquid Butadiene - Styrene Copolymers

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solvents (CCl_4); (b) in emulsion by the use of 0.5-10% diproxide as regulator, sodium salts of various sulfonic acids as emulsifiers, at 5-40°C; (c) in toluene in the presence of metallic sodium (1-10%) at 50-90°C. The low-molecular copolymers obtained were examined for their molecular weight, their double bond content, and their 1,4-bonds (by means of perbenzoic acid), and their hardening capacity was tested at 130-180°C. The copolymers obtained by means of sodium (molecular weight 4000-6000, 21-23% 1,4-bonds) are hardened within 8 hours to form a resin which is insoluble to 94%. The substances polymerized in emulsion (molecular weight 3000-5000) and in solution (molecular weight 1500-3000) (50-52%, 1,4-bonds) remained elastic after 40 hours of hardening and contained only 83-90% of insoluble substances. The glass reinforced plastics produced therefrom were resistant to humidity and had a breakdown voltage of 18.9-32 kv/mm; bending strength of 1080 kg/cm^2 and a Brinell hardness of 8.9 kg/mm^2. Epoxidation by means of peracetic acid or perbenzoic acid yielded resins which contained 3-5.8% epoxide groups, hardened on heating within a few hours and were insoluble to 96-98%. S. S. Medvedev is mentioned. There are 2 tables and 10 references:

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15.8104

AUTHORS: Akutin, M. S., Gorbunov, V. N., Margaritova, M. F., Nagibina, A. G., Rusakova, K. A.

TITLE: Synthetic Thermosetting Resins on the Basis of Low-molecular Liquid Butadiene - Styrene Copolymers

PERIODICAL: Plasticheskiye massy, 1960, No. 10, pp. 6-8

TEXT: The results of experiments conducted for obtaining low-molecular butadiene-styrene copolymers are described. These copolymers were examined for their usability in the production of thermosetting resins. Divinyl and styrene copolymers were produced by a method developed at the kafedra sinteza polimerov MITKhT im. Lomonosova (Chair of Polymer Synthesis of the Moscow Institute of Fine Chemical Technology imeni Lomonosov) (Ref. 10). [Abstracter's Note: The method is not described here]. The initiators used were benzoyl peroxide, diphenyl ethane hydroperoxide, cumene hydroperoxide. The yield obtained under optimum conditions was 60-65% referred to the monomers. The copolymer contained 20% styrene. The polymerization was performed (a) in inert solvents (hexane, heptane, benzene) or in active

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MARGARITOVA, M.F.

PHASE I BOOK EXPLOITATION SOV/4983

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii, SSSR, Moskva, 14-18 iyunya 1960 g; doklady i avtoreferaty. Sektsiya II. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18; Papers and Summaries) Section II. [Moscow, Izd-vo AN SSSR, 1960] 559 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

COVERAGE: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly the kinetics of various polymerization reactions initiated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering interpolation. There are summaries in English, French and Russian. No personalities are mentioned. References follow each article.

Bagdasar'yan, Kh.S., and Z.A. Sinitsina (USSR). Inhibition of Polymerization by Aromatic Compounds 22

Tüdös, F., I. Kende, and M. Azori (Hungary). Kinetics of the Inhibition of Polymerization of Styrene by Nitro Compounds 31

Razuvayev, G.A., L.M. Terman, V.R. Likhterov, and V.S. Etlis (USSR). Radical Decomposition Reactions of Some Peranhydrides and Peresters 53

Klebanskiy, A.L., and O.A. Timofeyev (USSR). On the Relative Activity of Hexafluoro-1,3-butadiene in Polymerization and Co-polymerization Reactions With Other Dienic Compounds 62

Pyrkov, L.M., and S.Ya. Frenkel' (USSR). Interchain Exchange Reactions in the Process of Radical Polymerization 72

Hardy, D., K. Nitrai, G. Kovač, and V.P. Li (Hungary). Kinetic Study of Radical Polymerization of Vinyl Monomers in the Presence of $SiCl_4$ 103

Kryszewski, M., and B. Grossmanowa (Poland). A Method of Measuring the Polymerization Rate at a High Degree of Conversion 120

Krishan, T., and M.F. Margaritova (USSR). Study of the Mechanism of Emulsion Polymerization 127

Ryshanek, A., and M. Hloušek (Czechoslovakia). The Polymerization Rate for a Single Particle During Emulsion Polymerization 135

Hrabák, F., and Ya. Zakhoval (Czechoslovakia). Emulsion Polymerization of Chloroprene 149

Tureka, E., and G. Wiśniewski (Poland). Change of Potential During Polymerization in Oxidation-Reduction Systems 157

Maťásek, Z., and A. Řezábek (Czechoslovakia). The Heat of Reaction As a Means of Studying the Mechanism of the Emulsion Polymerization of Styrene and Chloroprene 166

Spirin, Yu.L., D.K. Polyakov, A.R. Gantmakher, and S.S. Medvedev (USSR). Polymerization in the Presence of Organic Compounds of Alkali Metals 184

Zorotkov, A.A., S.P. Mitsengendler, V.N. Krasulina (USSR). On the Kinetics and Mechanism of the Polymerization of Methyl Methacrylate by Butyllithium 208

Kučera, M., M. Jelínek, I. Láníková, and K. Veselý (Czechoslovakia). Chain Degradation During the Anionic Polymerization of Octamethylcyclotetrasiloxane. The Formation of Stable Complexes at Active Centers 232

Machaček, Z., Y. Mejzlík, and K. Pác (Czechoslovakia). Kinetics of the Polymerization of Formaldehyde 253

Vesely, K. (Czechoslovakia). On the Mechanism of Ionic Polymerization 262

Zlámal, Z., and A. Kazda (Czechoslovakia). On the Role of Nonpolar Compounds in the Cationic Polymerization of Isobutylene 272

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

ZVEREV, M.P.; MARGARITOVA, M.F.

Polymerization of isoprene with styrene. Ukr.khim.zhur. 24 no.5: 626-628 '58. (MIRA 12:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni Dzerzhinskogo, Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.
(Isoprene) (Styrene) (Polymerization)

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SOV/81-59-15-55953

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, p 552 (USSR)

AUTHORS: [illegible], M.F., [illegible]linkin, A.A.

TITLE: [illegible] Low-Molecular Polystyrene by the Method of "[illegible]"

PERIODICAL: [illegible] Khim. [illegible], 1958, Nr 8, pp 14 - 20

ABSTRACT: [illegible] polymerization of styrene in CCl_4 and $CHBr_3$ solutions has been carried [illegible] and [illegible]°C and at various solvent-monomer ratios in the pressure of [illegible] ([illegible] - [illegible] benzoyl peroxide). The yield of the polymer was [illegible] gravimetrically (after its precipitation by CH_3OH) and the [illegible] of polymerization cryoscopically and by the method of extreme [illegible].

G. Korolev

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MARGARITOVA, M.F.; ZVEREV, M.P.

polymerization kinetics of 2-chloro-1,3-butadiene on the cis-form of polychloroprene. Ukr. khim.zhur. 23 no.6:734-737 '57. (MIRA 11:1)

1.Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. Dzerzhinskogo i Moskovskiy institut tonkoy khimicheskoy tekhnologii im. Lomonosova.
(Polymerization) (Chloroprene)

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MARGARITOVA, M. F.

73-1-13/26

AUTHOR: Margaritova, M. F. and Zverev, M. P.

TITLE: Copolymerisation of 2-Chlorobutadiene-1,3 and Acrylonitrile. (Sovmestnaya Polimerizatsiya 2-Khlorbutadiyena-1,3 s Akrilonitrilom.)

PERIODICAL: Ukrainiskiy Khimicheskiy Zhurnal, 1957, Vol.23, No.1, pp. 75 - 78 (USSR).

ABSTRACT: Investigationswere carried out on the mechanism of the above reaction. 4 sets of tests are discussed with starting solutions of varying monomer concentrations. Results of these tests are tabulated in table 1. The experiments were carried out in the presence of 2% benzoyl peroxide. It can be seen that the depth of polymerisation decreases with increasing acrylonitrile content in the starting mixture and the produced copolymers have a higher 2-chlorobutadiene-1,3 content. This shows the higher activity of 2-chlorobutadiene-1,3. On the basis of the obtained data the copolymerisation constants were calculated and it was found that α(for 2-chlorobutadiene-1,3) = 6.22; β(for acrylonitrile) = 0.15. Diagram 1 illustrates the compositions for 2-chlorobutadiene-1,3 - acrylonitrile, the composition of the starting mixture, the differential composition of the polymers, the integral

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MARGARITOVA, M. F.

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Copolymerization of bivinyl with fumaric and maleic acid esters. M. F. Margaritova and G. D. Berezhnoi. *Trudy Moskov. Inst. Tonkoi Khim. Tekhnol.* 1953, No. 4, 46-55; *Referat. Zhur., Khim.* 1954, No. 42815.—The copolymerization of bivinyl (I) with diethyl fumarate (II), diethyl maleate (III), dinonyl fumarate (IV), and dinonyl maleate (V) were studied. The copolymerization consts. were detd. to be: $k_{II}/k_{III} = 2.13$, $k_{III}/k_{III} = 0.25$, $k_{II}/k_{III} = 8.08$, $k_{III}/k_{III} = 0.11$, $k_{II}/k_{IV} = 2.02$, $k_{IV}/k_{IV} = 0.32$, $k_{II}/k_{V} = 5.36$, and $k_{V}/k_{V} = 0.12$. All these consts. were calcd. by the approx. equation (Gindin, *et al.*, *C.A.* 42, 5715c). Calcns. by the exact equation give for the system I-V $k_{II}/k_{IV} = 5.37$ and $k_{V}/k_{V} = 0.15$. Calcns. show that links of the ester consist of a single monomeric mol., while the links of the bivinyl at high content of I in the original mixt. consist of a large no. of mols. of I (50-60 units). A study of the relation between vitrification temp. of the copolymers and their compn. showed that in the case of copolymers of I with II or IV there is an increase in the vitrification temp. with an increase of the ester and polymer contents. In the case of copolymers of I with III or V the curve expressing this relation passes through a max. This is attributed to changes in the intra- and intermol. interaction with a change of the ester content of the mixt. M. Hosch

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MARGARITOVA, M.F.

Copolymerization of 1,3-butadiene with methacrylic acid esters. M. F. Margaritova and V. A. Ralskaya. *Trudy Moskov. Inst. Tonkoi Khim. Tekhnol.* 1953, No. 4, 37-45; *Referat. Zhur., Khim.* 1954, No. 42814.—Copolymerization of 1,3-butadiene (I) with Me (II) and nonyl (III) methacrylate was studied. The copolymerization consts. were detd. to be $k_{II}/k_{I,II} = 0.75$, $k_{II,II}/k_{II,I} = 0.31$, $k_{I,I}/k_{I,III} = 0.76$, and $k_{III,III}/k_{III,I} = 0.35$. The last two values were calcd. by the approximate formula (Gindin, *et al.*, *C.A.* 42, 5715e). For both systems azeotropic mixts. of the following compns. were observed: for the system I-II 73.5 mole % of I and 26.5 mole % of II, and for the system I-III 74.3 mole % of I and 25.7 mole % of III. Calcu. of the intramol. distribution of the azeotropic mixt. (Gindin, *et al.*, *C.A.* 42, 8016) show with the highest probability that areas exist contg. 1 link of I and 3 links of II in a row. A study of the relation between the vitrification temp. and compn. showed that the polymers of I and III have a lower vitrification temp. than the copolymers of I and II. — M. Hosek

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MARGARITOVA M.E.

22342-Margaritova, M.E. O Mekhanizme Dpystviya Regulyatorov PRI Tsepnoy Polimerizatsii. Vysokomolekulyar. Soyedineniya, VYP. 8, 1949, S. 35-41. Bibliogr: 24 NAZV.

SO: Letopis' No. 30 1949

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

1. IGNATOVICH, B. I., MARGARITOVA, G. F., MINKIN, S. YU., RUBIN, I. L.

2. USSR (600)

4. Sciatic Nerve

7. Data on the pathogenesis of experimental trophic ulcer of the extremities. Vop. neirokhir. 16 no. 5, '52.

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

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGARITOV, N.M.

New habitat of Pseudacolpenteron pavlovskii Bychowsky et Gussev, 1955(Monogenoidea, Dactylogyridae). Trudy Zool. inst. 35:137-139 '65. (MIRA 19:1)

1. Sofiyskiy universitet.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGARITOV, N.M.

Ichtyoparasitofauna of the Batak Reservoir. Godishnik biol 56 no.1:105-123 '61-'62 [publ. '64].

1. Chair of Hydrobiology and Pisciculture of the Faculty of Biology, Geography, and Geology of the University of Sofia, Sofia (Head of the Chair: [dots.] A.Angelov).

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGARITOV, N.

Notes on the helminthofauna of Bulgarian Freshwater fishes.
Izv Zool inst BAN 15:199-202 '64.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

BARDEANU, C., ing.; MARGARITESCU, M., ING.

Considerations on the use of closed expansion jars in the installations of central heating with hot water. Rev constr si mat constr 15 no.10:541-545 O '63.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

VARODIN, V., ing.; IONESCU, G., ing.; CHISCAN, V., ing.; [illegible]RIN, M., ing.; MARGARITESCU, D., ing.; NEGRESCU, V., ing.; [illegible]ALOENESCU, C., ing.

Aspects of the reflection seismic prospection in the Moesian Platform. Petrol si gaze 15 no.10:529-541 O '64.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

BRUCKNER, Silvia, conf.; DAN, B., dr.; MARGARIT, Z., dr.; TEODORESCU, Georgeta, dr.; LAZAR, Ecaterina, dr.; DIACONU, S., dr.

Current clinical and epidemiological aspects of diphteria in collectives. Med. intern. 14 no.6:711-714 Je '62.

1. Lucrare efectuata in Clinica I de boli contagioase (director: prof. M. Voiculescu).
(DIPHTHERIA) (EPIDEMIOLOGY)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

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MARGARIT, Maria; MARGARIT, Gh.

On the Tortonian of the region Sarmizegetusa-Zaicani (Hateg Basin). Comunicarile AR 12 no.8:949-957 Ag '62.

1. Comunicare prezentata de M.G. Filipescu, membru corespondent al Academiei R.P.R.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGARIT, Ilie, ing.; BALASZ, Mathe, ing.

Metrological activity in full progress at the Electroputere Works.
Metrologia apl 6 no.2:80-84 Ap-Je '59.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGARIT, Maria; MARGARIT, Gh.

On the Tortonian of the region Sarmizegetusa-Zaicani (Hateg Basin). Comunicarile AR 12 no.8:949-957 Ag '62.

1. Comunicare prezentata de M.G. Filipescu, membru corespondent al Academiei R.P.R.

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MARGARI[illegible], MAR[illegible] [illegible]

Facies [illegible] the [illegible] in the northwestern part of the Transylvanian Basin. [illegible] geol geof geogr [illegible] 309-319 [illegible].

1. Enterprise of Prospecting and Laboratories, Geol[illegible] Committee. Submitted June 19, [illegible].

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

PINTEA, V.; COTRUT, M.; MARGARINT, Iolanda

Physiological observations on the innervation of the carotid sinus of the sheep. Studii agr Timisoara 9 no.3/4:317-324 Jl-D '62.

1. Laboratorul de fiziologie animala a Institutului Agronomic, Timisoara si Laboratorul de fiziologie animala a Institutului Agronomic "Ion Ionescu de la Brad", Iasi.

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PHASE I BOOK EXPLOITATION SOV/4524

Chelovek v usloviyakh vysotnogo i kosmicheskogo poleta; sbornik perevodov iz inostrannoy periodicheskoy literatury (Man Under Conditions of High-Altitude and Cosmic Flight; Collection of Translations From Foreign Periodical Literature) Moscow, Izd-vo inostr. lit-ry, 1960. 462 p. No. of copies printed not given.

Translator (from German and English): I. I. Gurevich; Ed. (Title page): V. I. Ivanov, Doctor of Medical Sciences; Ed.: F. F. Kruglikov; Tech. Ed.: N. A. Iovleva.

PURPOSE: This book is intended for medical personnel working on problems of aviation and space medicine and for engineer-designers, scientific, and other workers in aviation and cosmonautics.

COVERAGE: The collection consists of 26 translations of periodical articles (20 American and 6 German) on problems of aviation and space medicine originally published in 1956 and 1958. Individual articles discuss problems of living conditions in cabins of flying vehicles, physiological stresses due to heat, acceleration, and noise, toxic hazards, decompression and cosmic irradiation. No personalities are mentioned. References accompany each article.

Man Under Conditions (Cont.) SOV/4524

Dondurant, S., N. P. Clarke, and others. Human Tolerance to Some of the Accelerations Anticipated in Space Flight (US Armed Forces Medical Journal, v. 9, 8, pp. 1093-1105, 1958) 219

Margaria, R. Wide Range Investigations of Acceleration in ~~Man and Animals~~ (J. Aviat. Med., v. 29, 12, pp. 855-871, 1958) 238

Von Beckh, H. J. Multidirectional G Protection in Space Flight and During Escape; a Theoretical Approach (J. Aviat. Med., v. 29, 5, pp. 335-342, 1958) 263

Tobias, C. A. Danger of Cosmic Rays in High Altitude Flights (Gefährdungen durch Höhenstrahlung beim Höhenflug, "Möglichkeiten und Grenzen des bemannten Fluges", 1956, pp. 37-72) 277

Schaefer, H. J. New Knowledge of the Extra-Atmospheric Radiation Field (J. Aviat. Med., v. 29, 7, pp. 492-500, 1958) 324

Schack, G. J. D., and D. G. Simons. Sensory Reactions Related to Weightlessness and Their Implications to Space Flight (Paper presented at the American Rocket Society, December, 1957) 336

Konecci, E. B. Decompression Events in Biosatellites (Paper presented at the American Rocket Society, June, 1958) 349

Ward, J. E. True Nature of Boiling of Organic Liquids in Space (J. Aviat. Med., v. 27, 5, pp. 429-439, 1956) 417

Clark, C. C. A Closed Food Cycle Atomic Conservation for Space Flight (J. Aviat. Med., v. 29, 7, pp. 535-539, 1958) 435

Hawkins, W. R. The Feasibility of Recycling Human Urine for Utilization in a Closed Ecological System (J. Aviat. Med., v. 29, 7, pp. 525-535, 1958) 445

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MARGARIA, R.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGANIYA, A.

Osoaviakhim solnechnoi Gruzii. [Society for Promotion of Defense and Aerochemical Construction in the sunny Georgia]. (Za oboronu, 1946, no. 21, p. 21).
DLC: TL504.Z3

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

DUMBADZE, D.; DUNDUA, D.; MARGANIDZE, V., red.; KHOSHTARIYA, V., red. izd-va; GLONTI, N., tekhn. red.

[Soviet Adzharia] Sovetskaia Adzhariia. Tbilisi, Gos. izd-vo "Sabchota Sakartvelo," 1960. 1 v. (MIRA 14:10)
(Adzharistan—Views)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGANI, I.A.

AVEDISOV, S.S., doktor med.nauk; MARGANI, I.A.

The problem of primary stomach sarcomas. Sov.med. 22 no.2:60-64 F '58. (MIRA 11:4)

1. Iz khirurgicheskogo otdeleniya gorodskoy bol'nitsy No.30 Moskvy (glavnyy vrach N.L.Belyayeva)
(STOMACH NEOPLASMS, surg.
sarcoma (Rus))
(SARCOMA, surg.
stomach (Rus))

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGAN, Serafim

Achievements obtained by the Otelul rosu Rolling Mills in raising labor productivity and reducing the cost price by introduction of labor standards with technical motivation. Metalurgia si constr mas 15 no.3:220-221 Mr '63.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

Rumania/Atomic and Molecular Physics - Physics of High Molecular Substances, D-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34504

Author: Margalogu, N., Stefanescu, D.

Institution: None

Title: X-Ray Diffraction Investigation of Certain New Polycondensates

Original Periodical: Commun. Acad. RPR, 1955, 5, No 12, 1707-1711; Rumanian; Russian and French resumés

Abstract: after 3 hours heating at a temperature of 180° and cooling to the ambient temperature, is identical with the x-ray diffraction pattern of the product not subjected to this operation, indicating that this product can be used at a temperature of approximately 150°, without experiencing any changes whatsoever.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGALOGU, N.

Rumania/Atomic and Molecular Physics - Physics of High Molecular Substances, D-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34504

Author: Margalogu, N., Stefanescu, D.

Institution: None

Title: X-Ray Diffraction Investigation of Certain New Polycondensates

Original Periodical: Commun. Acad. RPR, 1955, 5, No 12, 1707-1711; Rumanian; Russian and French resumes

Abstract: The authors report on results of experimental x-ray diffraction investigation of 2 products of polycondensation, of which one was made by them directly from the mixture of glicyrides, serving as raw material in the absence of $ZnCl_2$ or a $HClO_4$ solution, and the second by processing the first condensate by hexamethylenetetramine and maintaining the formed films at a temperature of 200°. The identity, from the x-ray-diffraction point of view, of the polycondensate obtained in the presence of $ZnCl_2$ and the polycondensate made in the presence of $HClO_4$ is confirmed. Based on the analysis of the x-ray diffraction pattern it is established, that this condensate is of the linear-polymer type, corresponding to its remarkable elastic properties, solubility, etc. An x-ray diffraction pattern of this product, obtained

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGALITADZE, N.A.; KIMERIDZE, E.R.

Vertical transport of tree pollen in the Greater Caucasus.
Trudy Tbil.bot.inst. 23:55-62 '64. (MIRA 18:4)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

[illegible]

[illegible]

[illegible]

[illegible] Institut [illegible]

[illegible] Ketskhoveli.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

TUMADZHANOV, I.N.; MARGALITADZE, N.A.

History of forests of the Kartlian and Kakhetian Ranges in the Holocene. Soob. AN Gruz. SSR 27 no.4:451-458 O '61. (MIRA 15:1)

1. AN Gruzinskoy SSR, Institut botaniki. Predstavleno akademikom N.N. Ketskhoveli.
(Kartlia--Paleobotany, Stratigraphic)
(Kakhetian Range--Paelobotany, Stratigraphic)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGALIN, P.

NIKONOV, Ye.; MARGALIN, P.

Analysis of operating expenses of procurement organizations. Muk.-elev.prom. 20 no.8:7-10 Ag '54. (MLRA 7:9)
(Grain trade--Accounting)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARGACHEVA, L.I.

"Hyaluronidase Content in the Chorion and Placenta in Women During the Course of Pregnancy and Birth." Cand Med Sci, First Leningrad Medical Inst, Leningrad, 1954. (RZhBiol, No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

L 41703-66 EWT(d)/EWT(1) GW/BC

ACC NR: AP6019582 (N) SOURCE CODE: UR/0115/66/000/004/0083/0084

AUTHOR: Nemtsev, Z. F.; Nemtseva, L. I.; Marfutin, I. V.

ORG: none

47

B

TITLE: Two-liquid hydrostatic differential altimeter

SOURCE: Izmeritel'naya tekhnika, no. 4, 1966, 83-84

TOPIC TAGS: altimeter, liquid level instrument, measuring instrument, temperature dependence

ABSTRACT: The proposed hydrostatic altimeter is based on the principle of interconnecting vessels. One liquid is poured over the other in each of the connecting vessels. When both vessels are at the same level, the heavy and light liquids are also at equal levels. When one vessel drops below the other, more of the heavy liquid is transferred to the lower vessel and the difference of the levels of the light fluid is amplified relative to that of the heavy one and serves as a sensitive measure of any tilt angle. Equations are derived for the level differential as a function of the temperature and densities of the liquids, and the measurement errors are estimated. The calculations demonstrate that a two-liquid altimeter increases the accuracy and sensitivity of the measurements and can be used in cases when small deviations from horizontality, planarity, and linearity are to be measured, such as in machine building, astronomy, geodesy, automation, erection work, and similar applications. Orig. art. has: 1 figure and 8 formulas.

SUB CODE: 14/ SUBM DATE: 00

Card 1/1 UDC: 681.2: 531.717

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

BERSHOV, L.V. ; MARFUNIN, A.S.; MINEYEVA, R.M.

Electronic paramagnetic resonance of Mg^{2+} in apophyllite. Dokl. AN SSSR 164 no.5:1141-1142 O '65. (MIRA 18:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Submitted April 9, 1965.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MKRTCHYAN, A.R.; MARFUNIN, A.S.

Quadrupole splitting and the disordered state of Li^7 in amblygonite $LiAlPO_4$ (OH,F). Dokl. AN SSSR 163 no.3:609-612 Jl '65. (MIRA 18:7)

1. Institut khimicheskoy fiziki AN SSSR i Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Submitted December 31, 1964.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

L 9410-66

ACC NR: AP5024691

1 formula, and 2 tables.

SUB CODE: 20/ 18 SUBM DATE: 09Apr65/ ORIG REF: 003/ OTH REF: 014

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

L 9410-66 EWT(1)/EWT(m)/EWP(j)/T/EWP(t)/EWP(b)/EWA(c) LJP(c) JD/WW/JG/GG/RM

ACC NR: AP5024691 SOURCE CODE: UR/0056/65/049/003/0743/0746

AUTHOR: Bershov, L. V.; Marfunin, A. S.; Mineyeva, R. M.

ORG: Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry of the Academy of Sciences SSSR (Institut geologii rudnykh mestorzhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR)

TITLE: Electron paramagnetic resonance of the tetrahedral complex $[MnF_4]^{2+}$ in scheelite

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 3, 1965, 743-746

TOPIC TAGS: electron paramagnetic resonance, manganese compound, single crystal, hyperfine structure, crystal symmetry

ABSTRACT: The authors have observed in a single crystal of natural scheelite two different Mn^{2+} spectra, which are naturally attributed to Ca and W sites. One of these spectra has the characteristic signature of a super-hyperfine structure from four F^{19} nuclei. The coordination of Mn^{2+} in the second spectrum is definitely tetrahedral. Both spectra (which overlap partially) have tetragonal symmetry with common Z axis. This makes it possible to obtain the constants of the spin Hamiltonian for Mn^{2+} in W sites, indicating a new charge compensation mechanism in scheelite. In addition, this is at present the only compound in which EPR spectra of Mn^{2+} with fluorine ligans in tetrahedral coordination are observed. Orig. art. has: 2 figures,

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

EWP(b)/EWA(c) IJP(c) JD/WJ/JG/GG/RM

SOURCE CODE: UR/0056/65/049/003/0743/0746

A. S.; Mineyeva, R. M.

re Deposits, Petrography, Mineralogy and Geochemistry

SSR (Institut geologii rudnykh mestorzhdeniy, petrografii,

ademii nauk SSSR)

agnetic resonance of the tetrahedral complex $[MnF_4]^{2+}$ in

al eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 3, 1965,

AGS: electron paramagnetic resonance, manganese compound, single crystal,

ABSTRACT: The authors have observed in a single crystal of natural scheelite two different Mn^{2+} spectra, which are naturally attributed to Ca and W sites. One of these spectra has the characteristic signature of a super-hyperfine structure from four F^{19} nuclei. The coordination of Mn^{2+} in the second spectrum is definitely tetrahedral. Both spectra (which overlap partially) have tetragonal symmetry with common Z axis. This makes it possible to obtain the constants of the spin Hamiltonian for Mn^{2+} in W sites, indicating a new charge compensation mechanism in scheelite. In addition, this is at present the only compound in which EPR spectra of Mn^{2+} with fluorine ligans in tetrahedral coordination are observed. Orig. art. has:

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ACCESSION NR: AP5003601

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growths, zone structure, nonstoichiometric compounds, and color centers. The new applications of minerals in lasers, masers, ferromagnetics, ferrites, phosphors, molecular screens, and similar devices make the study of electron structure and characteristics imperative. Many of these investigations, however, require special equipment, refined techniques, and high degrees of specialization. It is still necessary to apply as many techniques and disciplines as possible and as quickly as possible.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii, AN SSSR, Moscow (Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry, AN SSSR)

SUBMITTED: 19May64 ENCL: 00 SUB CODE: SS

NO REF SOV: 000 OTHER: 000

Card 3/3 mb

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involve electron paramagnetic resonance, nuclear magnetic resonance, nuclear quadrupole resonance, and ferromagnetic resonance. Long-known properties that should be applied (and are now being applied) to mineral investigations are the Hall effect, thermoelectric properties, dielectric penetrability, magnetic susceptibility, the Kerr effect, and the Faraday effect. The author reviews these and points out their importance in the new approach to mineralogy. The spectra of electron paramagnetic resonance are important in the physics of minerals because they represent one of the chief means of investigating the electron structure of crystals and also the fine details of atomic structure. Some valence states are not paramagnetic, however, and other techniques are necessary. In regard to nuclear magnetic resonance, the measurement of a magnetic field at constant frequency permits the observation of resonance of magnetic nuclei and thus the rapid analysis of isotopes. Best results are obtained with nuclei of H^1 and F^{19}, and also with Li^7, B^{11}, Na^{23+}, Al^{27}, and P^{31}. Nuclear quadrupole resonance, arising by transition between energy levels associated with quadrupole moments of nuclei, is most useful in studying Cl^{37}, Br^{79-81}, $Sb^{121-123}$, As^{75}, and Bi^{209}. All these resonance studies are new in mineralogy. Other techniques include Mossbauer absorption spectroscopy, electron microscopy, and combination polarization and x-ray microscopy. These techniques will help in solving problems connected with complex inter-

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L 39918-65

ACCESSION NR: AP5003601

S/0011/65/000/001/0003/00020

AUTHOR: Marfunin, A. S.

2

B

TITLE: The physics of minerals: a new promising trend in the border zone between solid state physics and natural science

SOURCE: AN SSSR. Izvestiya. Seriya geologicheskaya, no. 1, 1965, 3-20

30

TOPIC TAGS: solid state physics, mineral, electron paramagnetic resonance, nuclear magnetic resonance, quadrupole moment, Hall effect, thermoelectric phenomenon, Kerr effect, magnetic susceptibility, dielectric penetrability, Faraday effect

ABSTRACT: This report chiefly covers the discoveries made in solid state physics that have been, and ought to be, applied to the study of mineralogy. The study of atomic structure has had a great effect on understanding natural substances and has led to reconstruction of the entire system of mineralogy. At the present level of solid state physics, the chief objectives of study as an aid in mineralogy are the electron structure and the electrical properties. This involves a quantum evaluation of minerals, the use of modern spectral analysis in all its aspects. The principal new methods of investigating atomic and electronic structure of minerals

Card 1/5

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MEDVEDEVA, I.Ye.; PETROV, V.P.; KABANOVA, Ye.S.; MARFUNIN, A.S.; TSVETKOV, A.I.; PILOYAN, G.O.; MARFUNIN, A.S., doktor geol.-miner.nauk, otv. red.; ZAKHAROV, Ye.Ye., prof., glav. red.

[Achievements of science: Geochemistry, mineralogy, petrography, 1963-1964] Itogi nauki: geokhimiia, mineralogiia, petrografiia, 1963-1964. Moskva, Akad. nauk SSSR. In-t nauchnoi informatsii, 1965. 235 p. (MIRA 19:2)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S., doktor geol.-miner. nauk, otv. red.

[Geochemistry, mineralogy, petrography, 1962] Geokhimiia, mineralogiia, petrografiia 1962 g. Moskva, 1964. 235 p. (MIRA 18:5)

1. Akademiya nauk SSSR. Institut nauchnoy informatsii.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

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to a symmetry group 2:m in a general case and to m.2:m in a special case if any pair of the indicatrix axes coincide. The further calculation is carried out according to the above scheme. There are 11 references, 4 of which are Soviet.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR (Institute of the Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry of the Academy of Sciences, USSR)

PRESENTED: April 3, 1959, by D. S. Korzhinskiy, Academician

SUBMITTED: April 1, 1959

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groups of symmetry; m.2:m, if the pair of like indicatrix axes of the twinned crystal coincide, and 2 : m, if there are no coinciding indicatrix axes. A crystallographical method for the determination of these two groups is given. The ways of computing twinned crystals belonging to these optical symmetry groups are different, the course of the calculation, however, the same. It is shown in the points I:1 and 2, as well as II:1-3. The author explains the pseudo-monoclinic optical properties of the submicroscopically twinned feldspars as proof of the theory and as example of its application: the properties of pseudo-monoclinic albite, pseudo-monoclinic high-temperature albite (analbite), and andesine-labradors with a small angle of optical axes. The calculation method suggested by the author can also be applied to the more general case of an overlayer of crystalline scales of equal composition and thickness superimposed in any position. The plane of symmetry for 2 equal ellipsoids which are turned round any angle can always be drawn. The existence of a plane of symmetry, however, leads

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

3(8) SOV/20-127-4-41/60

AUTHOR: Marfunin, A. S.

TITLE: The Optic Properties of Submicroscopically Twinned Crystals

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 4, pp 869 - 872 (USSR)

ABSTRACT: After giving a survey on the publications on the problem mentioned in the title (Refs 1-3) the author states that a general theory and a method for the computation of the crystals mentioned in the title may be suggested assuming two conditions: 1) The summary difference of the thread is smaller than the wave length; 2) the individuals of the twinned crystal are present in the same quantity. The fulfilment of the first condition permits the observation of the optic properties of a submicroscopically twinned crystal by means of a resulting optical indicatrix. The second condition permits a simple method for the computation of the dimensions and orientation of the resulting indicatrix by means of using the basic method of crystallography, i.e. the symmetry method. Submicroscopically twinned crystals of all syngonies may be divided into 2 optical

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

BERSHOV, L.V.; MARFUNIN, A.S.

Estimation of the state of chemical bonds from the superfine structure of electron paramagnetic resonance spectra of manganese. Dokl. AN SSSR 155 no. 3:632-635 Mr '64. (MIRA 17:5)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Predstavleno akademikom N.V.Belovym.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

Symposium on feldspars in Copenhagen. Izv. AN SSSR. Ser.geol. 27 no.6:114-117 Je '62. (MIRA 15:5)

(Feldspars)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, Arnol'd Sergeyevich; AFANAS'YEV, G.D., otv.red.; SMOLINA, P.P., red.izd-va; KASHINA, P.S., tekhn.red.

[Phase relationskip, optic properties, and geological distribution of feldspars] Polovye shpaty - fazovye vzaimootnoshenii opticheskie svoistva, geologicheskoe raspredelenie. Moskva, Izd-vo Akad. nauk SSSR. 1962. 271 p. (Akademiia nauk SSSR.Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no.78) (MIRA 15:12)

1. Chlen-korrespondent AN SSSR (for Afanas'yev).
(Feldspar)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

Phase nature of potassium sodium feldspars. Zap.Vses.min.ob-va 89 no.6:623-639 '61. (MIRA 15:5)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Feldspars)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

Alkaline feldspars, their phase relationships and optical properties. Biul. MOIP. Otd. geol. 36 no.2:133 Mr-Ap '61. (MIRA 14:7)
(Feldspar)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A. S.

Doc Geol-Min Sci - (diss) "Field spars -- phase interactions, optic properties, geological distribution." Moscow, 1961. 31 pp; (Ministry of Higher Education, Moscow State Univ imeni M. V. Lomonosov); 110 copies; price not given; list of author's works on pp 30-31 (17 entries); (KL, 10-61 sup, 208)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.; RYKOVA, S.V.

Irrational twinning of potash feldspars. Dokl.AN SSSR 134 no.1: 171-174 S '60. (MIRA 13:8)

1. Institut geologii rudnykh mestorozhdeniy petrografii, mineralogii i geokhimii Akademii nauk SSSR. Predstavleno akademikom D.S. Korzhinskim.
(Feldspar)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

New optical orientation diagrams of potassium-sodium feldspars. Dokl.AN SSSR 133 no.4:939-942 Ag '60. (MIRA 13:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR. Predstavleno akad. D.S.Korzhinskim.
(Feldspar) (Crystallography, Mathemathical)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

Optical orientation diagram for acid and intermediate plagioclases. Izv. AN SSSR Ser. geol. 25 no.5:88-102 My'60. (MIRA 13:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Plagioclase--Optical properties)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

ABDULLAYEV, Kh.M.--- (continued) Card 2.

1. Vsesoyuznoye petrograficheskoye soveshchaniye. 2d, Tashkent. 2. Prezident Akademii nauk Uzbekskoy SSR (for Abdullayev). 3. Chleny-korrespondenty AN SSSR (for Abdullayev, Afanas'yev, Kuznetsov, Nikolayev). 4. AN Azerbaydzhanskoy SSR (for Azizbekov). 5. AN SSSR (for Satpayev). 6. AN Ukrainskoy SSR (for Semenenko). 7. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR (for Afanas'yev, Marfunin, Rub). 8. Inst.geologii Akademii nauk Uzbekskoy SSR (for Batalov). 9. Laboratoriya geologii dokembriya Akademii nauk SSSR (for Nikolayev). 10. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (for Polovinkina). 11. Institut geologii Akademii nauk Ukrainskoy SSR (for Semenenko).

(Mineralogy)

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ABDULLAYEV, Kh.M., glavnyy red.; ANTROPOV, P.Ya., red.; AZIZBEKOV, Sh.A., akademik, red.; AFANAS'YEV, G.D., red.; BATALOV, A.B., doktor geol.-mineral.nauk, red.; BELYAYEVSKIY, N.A., doktor geol.-mineral. nauk, red.; KOPTEV-DVORNIKOV, V.S., doktor geol.-mineral.nauk, red.; KUZNETSOV, Yu.A., red.; MARFUNIN, A.S., kand.geol.-mineral.nauk, red.; NIKOLAYEV, V.A., red.; POLOVINKINA, Yu.I., doktor geol.-mineral. nauk, red.; RUB, M.G., doktor geol.-mineral.nauk, red.; SATPAYEV, K.I., akademik, red.; SEMENENKO, N.P., akademik, red.; KHAMRABAYEV, I.Kh., doktor geol.-mineral.nauk, red.; PANOVA, A.I., red.izd-va; KITAYENKO, L.G., red.izd-va; KALOSHINA, T.V., red.izd-va; IVANOVA, A.G., tekhn.red.

[Magmatic activity and its role in the formation of minerals] Magmatizm i sviaz' s nim poleznykh iskopaemykh; trudy. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1960. 782 p.

(Continued on next card) (MIRA 13:11)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

AFANAS'YEV, G.D.; AFANAS'YEV, L.M.; BELIKOV, B.P.; KOPTEV-DVORNIKOV, V.S.; MIKHAYLOV, N.A.; MONICH, V.K.; FAVORSKAYA, M.A.; prinimali uchastiye: DISTANOVA, A.N.; YELISEYEVA, O.P.; MARFUNIN, A.S.; YUNAKOVSKAYA, Yu.V.; USTIYEV, Ye.K., doktor geol.-min. nauk, otv. red.; NEMANOVA, G.F., red. izd-va; BYKOVA, V.V., tekhn. red.

[Principles of the geological mapping of intrusive and extrusive formations as exemplified by petrographic studies in Kazakhstan, Transbaikalia, the Northern Caucasus, and Maritime Province] Printsipy geologicheskogo kartirovaniia intruzivnykh i effuzivnykh formatsii na primere petrograficheskikh issledovanii Severnogo Kavkaza, Kazakhstana, Zabaikal'ia i Primor'ia. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po geol.i okhrane nedr, 1960. 341 p. (MIRA 14:5)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii. 2. Sotrudnik Instituta geologicheskikh nauk AN Kaz. SSR (for Monich). 3. Sotrudnik Vsesoyuznogo geologicheskogo instituta (for Mikhaylov) 4. Sotrudniki Moskovskogo gosudarstvennogo universiteta (for Yunkovskaya, Distanova)

(Rocks, Igneous)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

Empirical equation of the dependence of plagioclase mean index of refraction on the composition. Zap.Vses.min.ob-va 88 no.3:346-348 '59. (MIRA 12:11)

(Plagioclase)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S.

Antisymmetry of plagioclases and method for determining them using the Fedorov universal stage. Izv.vys.ucheb.zav.; geol. i razv. 2 no.3:38-45 Mr '59. (MIRA 12:12)

1. Krasnoyarskiy institut tsvetnykh metallov i zolota im. M.I. Kalinina.

(Plagioclase)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

SOV/11-59-1-14/16

AUTHOR: Marfunin, A.S.

TITLE: One Hundred Years of Microscopic Petrography (Sto let mikroskopicheskoy petrografii)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 1, pp 120-124 (USSR)

ABSTRACT: The history of the development of microscopic petrography, first introduced by G. Sorby in 1858, is told in this article. The following Soviet scientists, who worked on this subject during the last 10 years, are mentioned in the article: A.N. Zavaritskiy, A.G. Kolotushkin, N.M. Melankholin, I.A. Ostrovskiy, Yu.A. Cherkasov, N.I. Nakovnik, V.B. Tatarskiy, D.S. Korzhinskiy, L.A. Vardanyants, V.V. Nikitin, V.A. Zavaritskiy, V.V. Arshinov, V.N. Lodochnikov, N.Ye. Vedeneyeva, S.V. Grum-Grzhimaylo, I.A. Ostrovskiy, A.A. Lyapunov, M.V. Pentkovskiy, V.P. Petrov, V.A. Nikolayev, D.S. Belyankin, V.S. Sobolev, M.M. Veselovskaya and A.A. Marakushev.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

A New Diagram of the Optical Orientation of Acid and Medium Plagioclase 20-118-6-38/43

ASSOCIATION. Institute for Nonferrous Metals and Gold imeni M. I. Kalinin, Moscow
(Moskovskiy institut tsvetnykh metallov i zolota im. M. I. Kalinina)

PRESENTED: November 1, 1957, by D. S. Korzhinskiy, Member of the Academy.

SUBMITTED: October 30, 1957.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

A New Diagram of the Optical Orientation of Acid and Medium Plagioclase

20-118-6-38/43

anorthite-component) and to the conventional degree of regulation: 0,0 - not at all regulated, 0,1 entirely regulated state. Plagioclase is characterized by 2 values, e. g.. 25/0,50 corresponds to a transition-plagioclase with 25°/o content of the anorthite-component and a degree of regulation equal to 0,50. The following must be pointed out when comparing the propsed diagram with the previously existing one: 1) The diagram is based on new conditions: the optics of plagioclase is determined as function of the composition and of the degree of regulation. 2) More factual data were used in its construction. 3) The diagram may be applied for the determination of plagioclases of any genetic type, since it is universal in this respect. 4) Besides the composition, the relative degree of regulation was determined. 5) Mass-measurements showed that the points do not concentrate beside any "low" - or "high-temperature-curves", but that they form a more or less uniform line.

There are 1 figure, 1 table, and 8 references, 4 of which are Slavic.

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great deal of data are available on the optic orientation of analyzed plagioclases of various origin. (See a complete summary in reference 7). The author restricts here only to the data which he additionally found. Results of measurements on the table of Fedorov of both annealed (at 1060°C) and unannealed samples of albite, oligoclase, andisine and labrador of various origin are given in table 1. Layers of ⊥ (010) [001] and ⊥ [001] ∥ (010) were entered in relation to the axes of the indicatrix on the sterogram, viz. for 48 plagioclases according to data obtained from literature and for 23 plagioclases according to own experiments. The isobaric lines of the compositions can be drawn by means of a simple interpolation just like the contour-lines on a map. The isobaric lines of the degree of regulation by means of interpolation between 2 extreme values are set up by the measurements obtained by the natural plagioclase of "low temperatures" (regulated) and of "high temperatures" (not regulated) both from natural and annealed samples. The designed diagram is given in figure 1. Completely drawn curves (arrows) show the isobaric lines of composition, lines show the approximate position of the isobaric lines of the degrees of regulation. The figures beside the curves correspond to the plagioclase-number (%-content of the

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20-118-6-38/43

AUTHOR: Marfunin, A. S.

TITLE: A New Diagram of the Optical Orientation of Acid and Medium Plagioclase
(Novaya diagramma opticheskoy oriyentirovki kislykh i srednikh plagioklazov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 6, pp. 1183-1186 (USSR).

ABSTRACT: Starting out from the thought that feldspars are regulated solid solutions (reference 1, 2), the following new conditions for the structure of the diagrams of dependence of the optical properties of plagioclase can be formulated: These properties depend on the composition and on the degree of regulation of Al and Si in the tetrahedral aluminum-silicon-oxygen skeleton of the structure. It hence results that the position of the crystal= lographic directions of the plagioclase in relation to the axes of the indicatrix must be expressed on the stereogram not by curves, but by "divariant" fileds the calibration of which can be performed by a net of curves, viz. of isobaric lines of com= position and of isobaric lines of the degree of regulation. A

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YEGOROV, N.I.; MARFUNIN, A.S.

Authigenic albitization in dolomites of the Northern Caucasus. Zap. Vses. min. ob-va 87 no.3:379-383 '58. (MIRA 11:10)
(Caucasus, Northern--Dolomite)

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11-9-9/14

Analogy of "High-Temperature" and Transitional Optical Properties of Plagioclases with Sanidine-Anorthoclase Optical Properties of Potash Feldspars

structural states of the studied plagioclases. Table 1 in the article gives qualitative characteristics of the structural state of associated potash feldspars and plagioclases. The comparison of cited data shows that in magmatic rocks there exist parallel series of potash feldspars and plagioclases which are in qualitatively analogous structural states: sanidine - anorthoclase - microcline and "high-temperature" - transitional - "low-temperature" plagioclases. Thus, the late Caucasian intrusions are characterized not only by the presence of sanidine-anorthoclase potash feldspars but also by the "high-temperature" - transitional - plagioclases. The article contains 2 diagrams, 1 table and 12 references, 7 of which are Slavic.

ASSOCIATION: Moscow Institute of Non-Ferrous Metals and Gold imeni M.I. Kalinin (Moskovskiy institut tsvetnykh metallov i zolota imeni M.I. Kalinina)

SUBMITTED: 11 December 1956

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001032320010-9

MARFUNIN, A.S

AUTHOR: Marfunin, A.S. 11-9-9/14

TITLE: Analogy of "High-Temperature" and Transitional Optical Properties of Plagioclases with Sanidine-Anorthoclase Optical Properties of Potash Feldspars (Analogiya "vysokotemperaturnoy" i perekhodnoy optiki plagioklazov s sanidin-anortoklazovoy optikoy kaliyevykh polevykh shpatov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, # 9, p 86-89 (USSR)

ABSTRACT: The author studied several plagioclases of intrusions with potash feldspar: 1) intrusive liparites from Tyrny-Auz, 2) El'dzhurtinskiy porphyry-like granites, 3) granodiorites from the Tepli mountain, 4) grano-diorite-porphyries from Ankavan, and 5) intradacites Kal'ko. The measurements were carried out on the Fedorov's table. 28 stereograms were obtained by which angles between the elements of twin indicatrixes were measured and coordinates of twinning axes were derived. The results definitely indicate the "high-temperature" and transitional optical properties of the studied plagioclases. A diagram (Fig. 2) was constructed which first, confirms the "high-temperature" and transitional nature of these plagioclases and second, establishes a continuous series of the

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