"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

USSR /Chemical Technology. Chemical Product... H-...
and Their Application
Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1732

anionite filters is effected in pairs (2-nd and 1-st stage) at a velocity of NaOH solution (50% at 2% concentration, the remainder at 0.2-0.25%) of 3-4 m/hour. Average daily consumption of NaOH 70 g per g-equivalent. Excess alkali on the basis of absorbed SiO about 400-800 g per g-equivalent. Consecutive regeneration of 2 filters of 1-st stage or of 2 filters of 1-st and 1 filter of 2-nd stage reduces expenditure of alkali to about 50 g per g-equivalent. Average expenditure of water for washing of anionite 3.0 m^3/m^2 (4.9 of partially desalinated and 3.1 H-cathionite treated). Exchange capacity of

Card 3/6

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

USSR /Chemical Technology. Chemical Products and Their Application H-5

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1732

AN-2F anionite (depending on acidity of water and concentration ratio of Cl^- and SO_4^{2-}) 670-1200 g-equivalent/m^3. H-filtrates of 2-nd stage yield, per filtration cycle, 3000-4000 m^3 of water per 1 m^3 of cathionite. The performance of OH-filters of 2-nd stage is not of insufficient uniformity due to inadequate durability of the ionite (10% annual loss) and low depth of water cushion. With the passage of 0.1 mg/liter of SiO_2, and an average concentration, per cycle, of 0.03-0.04 mg/liter, the silicon holding capacity of EDE-10P anionite is of 6-60 g-equivalent/m^3. Use of OH-filter of

Card 4/6

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

USSR /Chemical Technology. Chemical Products and Their Application H-4
Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1736

3-rd stage as the 2-nd stage of desilication makes it possible to raise the silicon holding capacity to 25-130 g-equivalent/m^3. No decrease in the exchange capacity of the anionite was observed during 9 months of operation. Oxidability of the initial water is lowered by 15.8% in H-filters of 1-st stage, 16.2% in OH-filters of 1-st stage, 10.4% in H-filters of 2-nd stage, 28% in OH-filters of 2-nd stage, 5.5% in OH-filters of 3-rd stage (total 75.9% of the initial value). Desalinated water feed of drum boilers stopped carry-over

Card 5/6

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

USSR /Chemical Technology. Chemical Products and Their Application
Water treatment. Sewage water.

H-5

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1732

of SiO_2 to medium pressure turbines and reduced purging of biolers from 7-9% to 1%.

Card 6/6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

AKOL'ZIN, P.A.; GURVICH, S.M.; KOTLYAR, R.V.; KOT, A.A.; MAMET, A.P.; MIKHAYLENKO, P.S.; PROKHOROV, F.G.; SOKOLOV, I.M.; CHERNOVA, L.A.; SHKROB, M.S.; YANKOVSKIY, K.A.; GUREVICH, L.S.; POLYAKOV, V.V.

To the editors of "Energetik." Energetik 5 no.3:11-12 Mr '57. (MIRA 10:3)

1. Vsesoyuznyy teplotekhnicheskiy institut im. Dzerzhinskogo (for Akol'zin, Kot, Yankovskiy) 2. TSentral'nyy kotoloturbinnyy institut (for Gurvich, Mamet,) 3. Teplo-elektro-proekt (for Gurevich). 4. Ministerstva elektrostantsiy (for Kotlyar, Prokhorov). 5. Teplovaya elektricheskaya tsentral'naya stantsiya No.9 (for Mikhaylenko, Polyakov) 6. Perevyazochnyy etapnyy punkt (for Sokolov). 7. Moskovskoye rayonnoye upravleniye energokhozyaystva (for Chernova). 8. Energeticheskiy institut Akademii nauk SSSR (for Shkrob).

(Boilers)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, P.S., inzh.

Three-year experience in operating a deep chemical desalting unit. Elek. sta. 31 no.3:25-31 Mr '60. (MIRA 13:8)
(Feed-water purification)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MEL'YANOVSKIY, P.A.; MIKHAYLENKO, S.A.; KOTENKO, A.A.

Bridge for measuring specific inductive capacitance of highly absorbing media in the radio frequency band. Prib. i tekh.eksp. 6 no.4:92-95 Jl-Ag '61. (MIRA 14:9)

1. Khar'kovskiy politekhnicheskiy institut.
(Bridge circuits)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L0362

S/185/62/007/008/002/008
D234/D308

5.2100

AUTHORS: Lutskiy, A.Ye., and Mikhaylenko, S.A.

TITLE: Hydrogen bond and static dielectric constant of organic liquids

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 8, 1962, 812 - 816

TEXT: In order to obtain a more general idea of the physical meaning of the correlation factor g, the authors investigated over 40 substances including alcohols, phenols, ethers, amines, amides and acids between 16 and 190°C. Measurements were made by the bridge method for substances with strong absorption and by the method of heterodyne beatings for other substances. The results were plotted in the form of $\epsilon(T)$ curves, compared with theoretical curves $\epsilon_{ons}(T)$ and used for determining $g_e(T)$ from Frelikh's equation in the Kirkwood approximation. [Abstracter's note: g_e not defined.] Four types of curves and of $g_e(T)$ dependences were found. The first

Card 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

type (nitrobenzene etc., o-nitrophenol etc.) corresponds to Onsager liquids. The second type (cyclohexanol, phenol, etc.) is explained by the authors by the existence of parallel or antiparallel preference orientation of neighboring molecules. The third and fourth type, where g_e remains constant or even increases with temperature, is explained by the existence of different $\overline{\cos}\ \gamma_i$ for different neighbors. There are 4 figures.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Kharkov Polytechnic Institute)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

LUTSKIY, A.Ye.; MIKHAYLENKO, S.A.

Hydrogen bond and physical properties of nitroanilines. Part 2: Static dielectric constant. Zhur.ob.khim. 32 no.9:3045-3057 S '62. (MIRA 15:9)

1. Khar'kovskiy politekhnicheskiy institut.
(Aniline) (Dielectric constants) (Hydrogen bonding)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

LUTSKIY, A.Ye.; MIKHAYLENKO, S.A.

Hydrogen bond and the statistical dielectric constant of liquids. Part 2: Correlation factor and the structure of monobasic carboxylic acids. Zhur.strukt.khim. 4 no.1:14-17 Ja-F '63. (MIRA 16:2)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.
(Acids, Fatty) (Hydrogen bonding) (Dielectric constants)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

LUTSKIY, A.Ye.; MIKHAYLENKO, S.A.

Hydrogen bond and the static dielectric constant of liquids.
Part 3: Correlation factor and structure of liquid amides.
Zhur.strukt.khim. 4 no.3:350-353 My-Je '63. (MIRA 16:6)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
(Amides) (Dielectric constants) (Hydrogen bonding)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

LUTSKIY, A.Ye.; MIKHAYLENKO, S.A.

Evaluation of the correlation factor for liquids with hydrogen bonding between molecules. Zhur. fiz. khim. 38 no.6:1414-1420 Je '64. (MIRA 18:3)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, S.A.; LUTSKIY, A.Ye.

Dielectric polarization of certain phenol, anisole, and aniline derivatives on superhigh frequencies. Zhur. fiz. khim. 39 no.6:1498-1500 Je '65. (MIRA 18:11)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina. Submitted April 12, 1964.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

ACC NR: AP7000142 SOURCE CODE: UR/0046/66/012/004/0405/0410

AUTHORS: Blagoy, Yu. P.; Butko, A. Ye.; Mikhaylenko, S. A.; Yakuba, V. V.

ORG: Physicotechnical Institute for Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR)

TITLE: Velocity of sound in liquid nitrogen, oxygen, and argon at temperatures higher than the normal boiling temperatures

SOURCE: Akusticheskiy zhurnal, v. 12, no. 4, 1966, 405-410

TOPIC TAGS: sound propagation, oxygen, nitrogen, argon, specific heat

ABSTRACT: The velocity of sound in liquid nitrogen, oxygen, and argon in the temperature region of 77—87K and 112—120K was determined. The investigation supplements the results of I. S. Radovskiy (Eksperimental'noye issledovaniye skorosti ul'trazvuka na linii nasyshcheniya v argone. Zh. prikl. mekh. i tekhn. fiz., 1963, 3, 159. Issledovaniya skorosti zvuka v zhidkom i gazoobraznom argone. Zh. prikl. mekh. i tekh. fiz., 1964, 3, 172). The experimental technique is described by A. Ye. Butko, S. A. Mikhaylenko, and V. V. Yakuba (Ul'trazvukovoy interferometr dlya nizkotemperaturnykh zhidkostey. Sb. Voprosy metodiki ul'trazvukovoy interferometrii. Tr. Vses. konferentsii po metodike ul'trazvukovoy interferometrii. Kaunas, Izd-vo Mintis, 1966). A schematic of the experimental installation is presented. From the

Card 1/2 UDC: 534.22:542.79

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

ACC NR: AP7000142

experimental results, values for the adiabatic and isothermal compressibility and specific heats at constant pressure and constant volume, respectively, were derived. The experimental results are tabulated. It was found that these results were in good agreement with data reported in the literature. Orig. art. has: 4 tables, 1 graph, and 6 equations.

SUB CODE: 20/ SUBM DATE: 26Apr65/ ORIG REF: 006/ OTH REF: 012

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

DOBROVAL'SKIY, M.F.; MIKHAYLENKO, T.I.

Quantitative determination of chlorine in stomach content. Ukr.biokhim.zhur. 27 no.1:113-118 '55. (MLRA 8:6)

1. Kafedra neorganichnoi khimii Kharkivs'kogo medichnogo instituta.
(Chlorine metabolism) (Stomach)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

BLUVSHTEYN, G.M.; MIKHAYLENKO, T.I.

Simple device for aerosol therapy. Vrach.delo supplement '57:37 (MIRA 11:3)

1. Ul'yanovskaya rayonnaya bol'nitsa Sumskoy oblasti.
(AEROSOL THERAPY)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

I

BLUVSHTEYN, G.M.; MIKHAYLENKO, T.I.

Acute tonsillogenic sepsis treated conservatively. Vrach.delo supplement '57:46-47 (MIRA 11:3)

1. Ul'yanovskaya rayonnaya bol'nitsa, Sumskoy obl.
(SEPTICEMIA)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

BLUVSHTEYN, G.M., MIKHAYLENKO, T.I.

Incidence of acute upper respiratory catarrhs and angina among the rural population. Vrach.delo no.6:643-645 Je '58 (MIRA 11:7)

1. Ul'yanovskaya rayonnaya bol'nitsa Sumskoy oblasti.
(THROAT--DISEASES)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.A.

Is fall plowing needed everywhere? Zemledelie 4 no.8:106-107 Ag '56. (MIRA 10:1)

1. Glavnyy agronom Ronginskoy Mashinno-traktornoy stantsii, Ronginskogo rayona, Maiyskoy ASSR.
(Mari A.S.S.R.--Plowing)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

APASHEV, M.D.; MIKHAYLENKO, V.D.; BELYAYEVA, I.F.

Use of a colored grating for the quantitative investigation of schlieren by the Toeppler optical method. Trudy Inst. dvig. no.6: 161-165 '62. (MIRA 16:5)

(Air flow) (Optical measurements)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

ZAGLUBOTSKIY, P.M.; DURNOV, G.P.; LAVRUSEVICH, V.V.; MIKHAYLENKO, V.I.; IVANOV, V.M., spetsred.; SHUIN, V.I., red.; FORMALINA, Ye.A., tekhn.red.

[Practices of efficiency promoters in ship repairing] Opyt ratsionalizatorov v sudoremonte. Moskva, 1959. 53 p. (MIRA 13:9)

(Ships--Maintenance and repair)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 1920-66 EWT(1)/EWT(m)/EPF(c)/EWP(j) LJP(c) RM

ACCESSION NR: AP5024131 UR/0185/65/010/009/1019/1024

AUTHOR: Mykhaylenko, V. I. (Mikhaylenko, V. I.); Teplyakov, P. O. (Teplyakov, P. A.); Trusov, V. V. 44,55 44,55 44,55

TITLE: Luminescence spectra of toluene and stilbene solutions at 77K 21,44,55 33 30 B

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 9, 1965, 1019-1024

TOPIC TAGS: toluene, luminescence spectrum, combination scattering

ABSTRACT: The present authors investigate the luminescence spectra of toluene and stilbene at 77K in various normal paraffins, in alcohol, and in azelaic acid. Results are presented in the form of comprehensive spectral tables. The luminescence spectra of toluene (D_{2h}) shows a most pronounced structure in nonane; the interpretation was carried out by means of the 250, 380, 535, 700, 995, 1140, 1242, 1390, 1490, 1595, 2225 cm^{-1} in excellent agreement with the frequencies of combination scattering of toluene. The triplet and singlet levels of toluene molecules belong to the B_{3u} type of symmetry. The stilbene fluorescence contained the 210, 630, 841, 998, 1195, 1320, 1430, 1597, 1637 cm^{-1} frequencies. Singlet stilbene molecules (C_{2h}) have an A_u or B_u symmetry. Results thus show that toluene and stilbene molecules are deformed in normal paraffins and that the structure of

Card 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 1920-66

ACCESSION NR: AP5024131

their luminescent spectra are essentially different. Orig. art. has: 2 formulas and 3 tables.

ASSOCIATION: Odes'ke vyshche inzhenerne mors'ke uchylyshche (Odessa Higher Maritime Engineering School) 44,55

SUBMITTED: 25Sep64 ENCL: 00 SUB CODE: OC, GC, OP

NO REF SOV: 012 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

TEPLYAKOV, P.A. [Tepliakov, P.A.], MIKHAYLENKO, V.I. [Mykhailenko, V.I.]; TRUSOV, V.V.

Quasi-line phosphorescence spectra of aromatic hydrocarbons in other. Ukr. fiz. zhur. [illegible] no. [illegible] N [illegible].

(MIRA 18:12)

1. Odesskoye vysshe[illegible] [illegible]. Submitted December 16, 1964.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 15567-66 EWT(1)/EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6004405 SOURCE CODE: UR/0051/66/020/001/0058/0064

AUTHOR: Mikhaylenko, V. I.; Teplyakov, P. A.; Trusov, V. V.; Martynchenko, V. M.

ORG: none

TITLE: Vibrational structure of the luminescence spectra for frozen solutions of naphthalene and tolan

21, 44, 55 34 B

44155

SOURCE: Optika i spektroskopiya, v. 20, no. 1, 1966, 58-64

TOPIC TAGS: luminescence spectrum, naphthalene, molecular physics

ABSTRACT: The authors study the fluorescence and phosphorescence spectra of tolan in nonane as well as the phosphorescence spectra of naphthalene in pentane, hexane and heptane. The excitation source was radiation from a mercury lamp passed through a quartz monochromator. The error in measurements of the spectral frequencies was 10-15 cm^{-1}. The phosphorescence spectra for naphthalene in the solvent mentioned above begin with a very strong line at 21270 cm^{-1} which agrees satisfactorily with the experimental data of other authors. The strong intensity of the line corresponding to the nonvibrational $T \rightarrow S$ transition implies that this transition is allowed

Card 1/2

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 15567-66
ACC NR: AP6004405

by the selection rules imposed by molecular symmetry (although exclusion with respect to spin remains in force). The difference in structure for the fluorescence and phosphorescence spectra of naphthalene solutions indicates that there is a difference in the types of symmetry for the first excitation singlet and triplet levels. On the other hand the structure of the fluorescence and phosphorescence spectra for solutions of tolan and nonane at 77°K are completely identical. The experimental data show that the symmetry of the triplet and first excited singlet level for tolan molecules is B_{3u}. B_{1u} symmetry is characteristic of the phosphorescence level for the naphthalene molecule. Orig. art. has: 3 tables, 1 formula.

SUB CODE: 20/ SUBM DATE: 03Nov64/ ORIG REF: 012/ OTH REF: 015

Card 2/2 mc

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L01252-66

ACCESSION NR: AP5020614 UR/0048/65/029/008/1419/1421

AUTHOR: Teplyakov, P. A.; Trusov, V. V.; Mikhaylenko, V. I.; Martynchenko, V. M.

TITLE: Influence of the solvent on the luminescence spectra of diphenylene oxide and diphenylacetylene (Report, 13th Conference on Luminescence held in Khar'kov 25 June to 1 July 1964)

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 8, 1965, 1419-1421, and insert facing p. 1409

TOPIC TAGS: luminescence spectrum, fluorescence spectrum, line spectrum, solution property, organic compound, vibration frequency

ABSTRACT: In order to investigate the influence of the solvent on quasi-line (phonon free) luminescence spectra, the authors have examined the fluorescence and phosphorescence spectra of diphenylene oxide and diphenylacetylene in n-hexane, n-heptane, n-octane, n-nonane, ethyl alcohol, ether, glutaric acid, and azelaic acid at 77°K. The phosphorescence spectra were recorded with an apparatus that has been described elsewhere (V.V.Trusov and P.A.Teplyakov, Optika i spektroskopiya, 16, 52, 1964). The fluorescence spectra were excited by a group of mercury lines isolated with a quarts monochromator. The phosphorescence spectra of both

Card 1/2

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L01252-66

ACCESSION NR: AP5020814

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luminophors showed quasi-lines in all the solvents except glutaric acid; in this solvent the diphenylene oxide spectrum had 15 lines and the diphenylactylene spectrum had none. The most structured diphenylene oxide spectrum was that in heptane (89 lines between 405 and 460 millimicron) and the most structured diphenylacetylene spectrum was that in nonane (36 lines). The fluorescence spectra also consist of quasi-lines, but they were less sharp than in the phosphorescence spectra. The diphenyl oxide spectrum was analyzed in terms of 16 vibrational frequencies that have been found in the combination scattering spectrum by P.Doncelot and M. Chaix (Compt. rend., 202, 851, 1936). The diphenylacetylene spectrum was analyzed in terms of 11 vibrational frequencies that are in good agreement with the frequencies found in the Raman and infrared spectra by I.N.Khalimonova (Optika i spektroskopiya, 14, 639, 1963). Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Odesskoye vysshaye inzhenernoye morskoye ychilishche (Odessa Naval Engineering College) 55 44

SUBMITTED: 00 ENCL: 00 SUB CODE: OP, GC

NO REF SOV: 005 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 01270-66 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EWP(j) IJP(c) RM

ACCESSION NR: AP5020815 UR/0048/65/029/008/1422/1424

AUTHOR: Mikhaylenko, V. I.; Teplyakov, P. A.; Trusov, V. V.; Teplyakov, V. A.

TITLE: Vibrational structure of the spectra of organic molecules with D_{2h} symmetry [Report, 13th Conference on Luminescence held in Kyar'kov 25 June to 1 July 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 8, 1965, 1422-1424

TOPIC TAGS: luminescence spectrum, phosphorescence spectrum, line spectrum, solution property, vibration spectrum, molecular vibration, molecular symmetry, selection rule, organic compound

ABSTRACT: The authors discuss data in the literature on the quasi-line luminescence spectra of diphenyl, diphenylacetylene, and stilbene in normal paraffin solvents in order to determine the extent to which the vibrational selection rules due to the molecular symmetry are violated. Diphenyl has D_{2h} symmetry. From a discussion of the quasi-line phosphorescence spectrum it is concluded that only the single electron transition $B_{2u}-A_{1g}$ is active in the phosphorescence spectrum and that the selection rules are rigorously satisfied. Diphenylacetylene also has D_{2h} symmetry. Best agreement with the experimental data was obtained with the assumption that the symmetry of the triplet level is B_{3u}. If this assumption is correct there is only

Card 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 01270-66

ACCESSION NR: AP5020815

6

one weak forbidden b_{3g} vibration evinced in the phosphorescence spectrum. This violation of the selection rule is ascribed to distortion of the molecule when the solution is frozen. Stilbene does not have D_{2h} symmetry, but its spectrum is nevertheless analyzed in terms of the D_{2h} group. This procedure is justified by the close similarity between the stilbene and diphenylacetylene molecules. If the first excited singlet level of stilbene has $^1B_{3u}$ symmetry, there is only a single forbidden b_{3g} vibration evinced in the luminescence spectrum. The violation of the selection rule is again ascribed to deformation of the molecule, and it is conjectured that this deformation consists of a change in the angle between the double and single bonds with the result that the molecule assumes C_{2h} symmetry. The authors close with a brief quotation from E.V.Shpol'skiy to the effect that group theory is useful, among other things, for detecting and analyzing minute molecular deformations. Orig. art. has: 1 table.

ASSOCIATION: Odesskoye vysshoye inzhenernoye morskoye uchilishche (Odessa Naval Engineering College)

SUBMITTED: 00 55,44 ENCL: 00 SUB CODE: OP, GC

NO REF SOV: 010 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.I.

Modernized optical and acoustic gas analyzer. Metallurg 8 no.6:12 Je '63. (MIRA 16:7)

1. Smolenskiy filial Nauchno-issledovatel'skogo instituta teploenergeticheskogo priborostroyeniya Gosudarstvennogo komiteta Soveta Ministrov SSSR.
(Gases--Analysis)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.I.

Industrial testing of a modernized optical and acoustic gas analyzer of the OA series. Sakh.prom. 37 no.6:27-29 Je '63. (MIRA 16:5)

1. Smolenskiy filial Nauchno-issledovatel'skogo instituta teploenergeticheskogo priborostroyeniya Gosudarstvennogo komiteta Soveta Ministrov SSSR.

(Gases—Analysis)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.I.

Modernization of the optical and acoustical gas analyzers. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.4:39-40 Ap '64. (MIRA 17:5)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KIPER, Ye.V.; MIKHAYLENKO, V.P.; KOVALEV, I.T.

Reliability potentials of the automatic turret lathes. Stan. i instr. 36 no.5:10-11 My '65. (MIRA 18:5)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V. P. Cand Tech Sci -- (diss) "Study of errors during the treatment of parts in lathe chucks" Len, 1956. 14 pp (Min of Higher Education USSR. Len Polytechnic Inst im M. I.Kalinin), 100 copies (KL, 13-58, 97)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.V.

Diagnostic value [illegible] n [illegible]sis.
Lab. delo no. [illegible]

1. Kafedra fakul'tetskoy [illegible] A.
Simagina Orenburgskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.V. (Moskva A-299, ul.Priorova,d.11,kv.7)

Treatment of stenotic ligamentitis of the fingers with hydrocortisone. Ortop., travm. i protez. 26 no.5:52-54 My '65. (MIRA 18:10)

1. Iz otdeleniya kisti (zav. - doktor med. nauk V.N. Blokhin) TSentral'nogo instituta travmatologii i ortopedii (dir. - chlen-korrespondent AMN SSSR prof. M.V. Volkov).

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.V.

Splint for the treatment of fractures of finger phalanges. Ortop., travm. i protez. 27 no. 1:84-85 Ja '66 (MIRA 19:1)

1. Iz TSentral'nogo instituta travmatologii o ortopedii (direktor - chlen-korrespondent AMN SSSR M.V. Volkov). Submitted June 28, 1965. Adres avtora: Moskva A-299, ul. Priorova, d. 10, TSentral'nyy institut travmatologii i ortopedii.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.Ya.

Work experience gained in the compilation of the "Index of geographic names for the book-format atlas of the U.S.S.R." Sbor.st.po kart.no.8:41-43 '55. (MIRA 10:12)
(Atlases) (Names, Geographical)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.Ye., (Kiyev); KONONENKO, A.F. (Lubny).

Textbooks for students from the sevent to the tenth classes of secondary schools. Kat v shkole no. 6:67-69 N-D '56. (MIRA 10:1)
(Geometrical drawing--Textbooks)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.Ye. (Kiyev); KONONENKO, A.F. (Lubny).

"Elements of descriptive geometry in school" by N.V. Zelenin. (MLRA 10:6)
Mat. v shkole no.3:81-83 My-Je '57.
(Geometry, Descriptive)
(Zelenin, N.V.)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.Ye., kandidat tekhnicheskikh nauk; MENIOVICH, S.N., inzhener.

Practical application of mechanical drawing. Politekh.obuch. no.4:45-50 Ap '57. (MIRA 10:7)
(Mechanical drawing--Study and teaching)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.Ye., kand.tekhn.nauk, Kiyev.; LOPATKIN, K.P., prepodavatel'

Models in mechanical drawing lessons. Politekh.obuch. no.11:63-70 N '57. (MIRA 10:10)

1.Shkoly No. 6 i No. 116, Khar'kov.
(Mechanical drawing)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, V.Ye., (Kiyev); MENIOVICH, S.N., (Kiyev)

Sketches and drawings used in the classroom instruction in physics. Fiz. v shkole 17 no.1:51-56 Ja-F '57. (MLRA 10:2)

(Physics--Study and teaching)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KOLOTOV, Stepan Mitrofanovich, prepodavatel'; DOL'SKIY, Yevgraf Yevgen'yevich, prepodavatel'; MIKHAYLENKO, Vsevolod Yevdokimovich, prepodavatel'; GUSEV, Nikolay Aleksandrovich, prepodavatel'; GORLENKO, Boris Sergeyevich, prepodavatel'; ANDRUSHCHENKO, V., red.; IOAKIMIS, A., tekhn.red.

[Course in descriptive geometry] Kurs nachertatel'noi geometrii. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1958. 321 p. (MIRA 12:2)

1.Kiyevskiy inzhenerno-stroitel'nyy institut (for Kolotov, Dol'skiy, Mikhaylenko, Gusev, Gorlenko).
(Geometry, Descriptive)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KOLOTOV, Stepan Mitrofanovich, prof., prepodavatel'; DOL'SKIY, Yevgraf Yevgen'yevich, kand. tekhn. nauk, prepodavatel'; MIKHAYLENKO, Vsevolod Yevdokimovich, kand. tekhn. nauk; GUSEV, Nikolay Aleksandrovich, kand. arkhit., prepodavatel'; GORLENKO, Boris Sergeyevich, prepodavatel'; KOLOTOVA, Ol'ga Antonovna, prepodavatel'; BERGER, K.V., red.; SERAFIN, V.T., tekhn. red.

[Course in projective geometry] Kurs nachertatel'noi geometrii. 2. izd. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 313 p. (MIRA 15:1)

1. Kiyevskiy inzhenerno-stroitel'nyy institut (for all except Berger, Serafin).

(Geometry, Projective)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye. A.

"Effectiveness of Planting Sugar Beet in the form of Ground Seeds," Sov. Agron., No. 5, 1949. Zhitova Agricultural Inst. Cand. Agricultural Sci.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye. A.

Mikhaylenko, Ye. A. - "The use of BN-type Babbit metal in tractor engines", Trudy Zhitomirsk. s. -kh. in-ta, Vol. 111, 1949, p. 85-90.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye. A.

MIKHAYLENKO, Ye. A.: "New procedures in the sowing and cultivation of sugar beets." Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev. Moscow, 1956. (Dissertation for the Degree of Doctor in Agricultural Sciences).

SO: Knizhnaya letopis', No 23, 1956

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye.A., kandidat sel'skokhozyaystvennykh nauk.

Practice in cultivating fall-plowed fields for sugar beet. Dokl. Akad. sel'khoz. 21 no.8:20-23 '56. (MLRA 9:10)

1. Zhitomirskiy sel'skokhozyaystvennyy institut. Predstavleno akademikom I.V. Yakushkinym.

(Sugar beets) (Tillage)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

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: [illegible] ...raine,
[illegible] Plants - [illegible] ...oleiferous, [illegible]

[illegible] ...14, [illegible] 3, [illegible]

: Tarasyenko, [illegible]

: Progressive [illegible] Beet Cultivat[illegible]

: [illegible], Inform. Bult [illegible] v.d. [illegible] 1957, No. 4, [illegible]-70
: No abstract

Card 1/1

117

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye.A., dotsent

Causes of breakdowns of geared transmissions of the electric locomotives. Trudy DIIT no.29:119-124 '59. (MIRA 13:5)
(Electric locomotives)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye.A., prof.; MERTSEDIN, R.N.

Improving the design and increasing the durability of cultivator cutter-type blades. Trakt. i sel'khozmash. no.11:20-21 N '65. (MIRA 18:12)

1. Zhitomirskiy sel'skokhozyaystvennyy institut.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Ye.A., prof.

Buffers in fall plowing. Zemledelie 27 no.8:29-30 Ag '65. (MIRA 18:11)

1. Zhitomirskiy sel'skokhozyaystvennyy institut.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

BARSUKOV, N.A., dotsent; MIKHAYLENKO, Ye.I.

Treatment of some inflammatory diseases by the electrophoresis of sulfanilamide preparations. Veterinariia 40 no.2:56-58 F '63. (MIRA 17:2)

1. Yakutskiy gosudarstvennyy universitet (for Barsukov). 2. Zaveduyushchiy Yakutskoy gorodskoy veterinarnoy lechebnitsey.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

BAKSHEYEV, N.S., prof.; MIKHAYLENKO, Ye.T.

Dynamics of the content of the contractile protein actomyosin in the myometrium during various periods of pregnancy. Akush. i gin. 39 no.5:21-26 S-O '63. (MIRA 17:8)

1. Iz kafedry akusherstva i ginekologii No.1 (zav. - prof. N.S. Baksheyev) Kiyevskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

BAKSHEYEV, I.S., prof.; [illegible]

Effect of [illegible]
system and [illegible]
1 gin. 4 no. [illegible]

1. Kafedra [illegible]
Baksheyev) Ki[illegible]

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MIKHAYLENKO

a-3

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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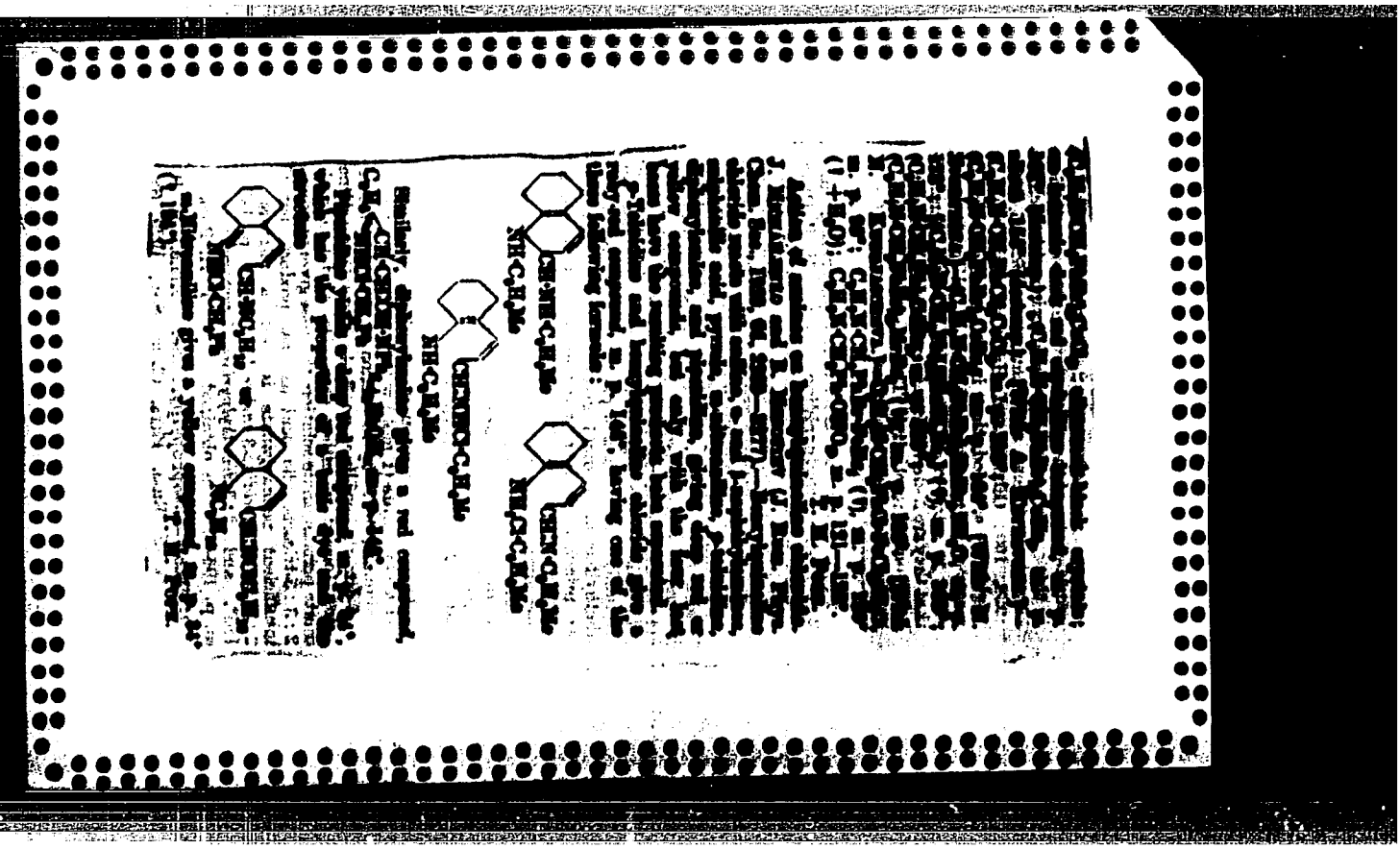

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu. Ya.

Absorption of ultraviolet rays by solutions of potassium and sodium vanadate. Yu. Ya. Mikhailenko and K. G. Shvebel'blit *Redkie Metal* 4, No. 7, 19-27 (1935). The behavior of 0.0005 *M* solns. of K_3VO_4 and Na_3VO_4 toward the absorption of wave lengths of 280-450 A was studied as they were gradually acidified. A sharp change in the absorption of various wave lengths occurs when the concn. of the H ion is 2.5-3.0 times that of the vanadate ion. This indicates the beginning of the dehydration of the vanadate ion. H. W. Rathmann

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

BC MIKHAYLENKO, Yu. Ya

A 1

Tautomerism of toluene, from its absorption spectra at different temperatures. J. J. Michailenko and A. P. Kreschkov (J. Gen. Chem. Russ., 1936, 6, 102—106).—The absorption spectrum of PhMe in π-C_6H_{14} (λ=2280—2780 A.) has been determined at 18°; at 67° the absorption bands become wider, and a new band appears at 2400—2500 A. The formation of an extra-nuclear double linking is suggested to account for this. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, YU. YA.

CA

The tautomerization of toluene according to its absorption spectrum at various temperatures. Yu. Ya. Mikhaylenko and A. P. Kreshkov. *J. Gen. Chem.* (U. S. S. R.) 6, 102-6(1936).—When 0.002 *M* MePh in CaH_6 is heated from 18° to 67° the absorption bands in the ultraviolet region become broader and new bands appear from 2400 to 2500 A. This is interpreted to mean that the content of MePh tautomer, having an olefin linkage (aliphatic methenyl), has increased. Lewis W. Butz

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu. Ya.

A-1

Oxidising properties of pyrites. J. I. MICHAILENKO and A. P. KRESCHKOV (J. Gen. Chem. Russ., 1937, 7, 1990—1996).—FeS_2 is regarded as a salt of H_2S_2, which may exhibit oxidising properties with reducing agents (H_2, Fe, Zn, Al, Cu, Fe–P), reducing properties with oxidising agents (O_2, HNO_3, Cl_2, etc.), or may enter into oxidation-reduction reactions.

R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu. Ya.
BC

6 I-8

[Utilization of] ferrophosphorus, obtained as a by-product of preparation of phosphoric acid. J. I. MICHAILENKO and A. P. KRESCHKOV (J. Chem. Ind. Russ., 1937, 14, 346—353).—89—93% of the P present in Fe phosphide is recovered as Na_3PO_4 by heating with FeO_2 (700—800°; 2 hr.), extracting the melt with HNO_3 or HCl, pptg. Fe with aq. NaOH or NH_3, filtering, and concentrating the filtrate. Equally good results are achieved by fusion with $NaNO_3$-NaOH or -Na_2CO_3, and somewhat higher yields (95-96%) by fusion with Na_2SO_3.

R.T.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu. Ya.

BC

PROCESSES AND PROPERTIES INDEX

1

Chemistry of phosphorus. J. I. Michailenko and V. I. Semischin (*J. Gen. Chem. Russ.*, 1944, 14, 1025—1029).—The behaviour of P and its compounds is explained on the assumption that it can give rise to the anion P''' and the cations P', P'', P''' and P''''. White P is thus represented as P'_3P''', P_4O_6 as P' ($P''''O_{1/2}$ and P_4O_{10} [illegible] O ($P''''O_3$).

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, YU. YA.

16

Absorption Spectrochemical Analysis in the Ultraviolet Region of the Spectrum. (In Russian.) Iu. Ia. Mikhailenko. *Progress in Chemistry* (U.S.S.R.), v. 16, July Aug. 1947, p. 443-460.

A review. 226 ref.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, YU. YA.

USSR/ Chemistry - Qualitative analysis

Card 1/1 : Pub. 145 - 5/14

Authors : Kreshkov, A. P.; Mikhaylenko, Yu. Ya.; and Yakimovich, G. F.

Title : Qualitative analysis of organo-silicon compounds by the method of infrared absorption spectroscopy

Periodical : Zhur. anal. khim. 9/4, 208-216, Jul-Aug 1954

Abstract : The infrared absorption spectra of certain Si-organic compounds were investigated. The qualitative analysis of Si-organic compounds, based on the investigated infrared absorption spectra, was found to be perfectly applicable to a wide variety of Si-compounds, namely, alkoxy- and aroxysilanes, alkyl- and arylalkoxysilanes, alkyl- and arylsilanes, siloxanes, a.o. Analytical signs, which make it possible to establish the presence of specific atomic groupings, were discovered and are described. Ten references: 6-USA; 3-USSR and 1-French (1940-1951). Tables; graphs.

Institution : The D. I. Mendeleyev-Order of Lenin Chemical Technological Institute, Moscow

Submitted : April 6, 1953

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu. Ya.

USSR.

Qualitative analysis of silicon organic compounds by means of infrared absorption spectroscopy. A. P. Kreshkov, Yu. Ya. Mikhailenko, and G. F. Yakimovich. J. Anal. Chem. U.S.S.R. 9, 281-40(1954)(Engl. translation) See C.A. 48, 13542a. K. L. H.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, YU. YA.

USSR/Chemistry

Card 1/1

Authors : Kreshkov, A. P. Mikhaylenko, Yu. Ya., and Yakimovich, G. F.

Title : Study of infrared absorption spectra of silicon-organic compounds

Periodical : Zhur. Fiz. Khim. 28, Ed. 3, 537-551, March 1954

Abstract : Investigated were the infrared absorption spectra of numerous silicon-organic compounds,-tetramethoxysilane, tetraethoxysilane, tetrabutoxysilane, tetraisonanyloxysilane, tetramethylethoxysilane, tetraphenoxysilane, tetraphensyilane, phenyldimethylchlorosilane, diethyldiethoxysilane, diethylsilanediol and hexaethyldisiloxane. Spectral signs are given for the identification of functional groupings and bonds: $-CH_3$, $\equiv Si-CH_3$, C_6H_5-, Si-O, -O-R, $-CH=CH_2$, O-H. Spectral signs were established enabling to distinguish between one class of silicon-organic compounds and the other. Twenty references; 1 German since 1885, 1 USSR, since 1908. Tables, graphs.

Institute : The D. I. Mendeleyev Chemical-Technological Institute, Moscow, USSR

Submitted : July 1, 1953

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

AUTHORS: Kreshkov, A.P., Mikhaylenko Yu.Ya., Kirichenko, E.A. 76-12-13/27

TITLE: Investigation on Highly Molecular Silicon-Organic Compounds According to the Method of Infrared Spectroscopy (Issledovaniye vysokomolekulyarnykh kremniyorganicheskikh soyedineniy metodom infrakrasnoy spektroskopii).

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 12, pp.2690-2696 (USSR)

ABSTRACT: Infrared absorption spectra of aniline formaldehyde-resin and of highly molecular silicon-organic compounds, which were obtained on the basis of the interaction of original products with the condensation of aniline and formaldehyde with trimethylchlorsilanqand dimethyldichlorosilane, as well as of the original products with the condensation of glycerine and phthalanhydrite with diphenyl-silandiol, trimethylchlorosilane, dimethylchlorosilane and tetraethoxysilane are investigated here for the first time. It was stated that between the molecules of the aniline-formaldehyde-resin and the molecules of dimethyldichlorosilane and of the trimethylchlorosilane, as well as between the molecules of glyphthal-resin and the molecules of diphenylsilandiol trimethylchlorosilane, dimethylchlorosilane and tetraethoxysilane a chemical process takes place. This process is caused by the interaction of hydroxyl-groups of highly molecular

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Investigation on Highly Molecular Silicon-Organic Compounds According to the Method of Infrared Spectroscopy 76-12-13/27

organic compounds with active atoms or functional groups of silicon-organic original compounds. There are [illegible] figures, and 17 references, 6 of which are Slavic.

ASSOCIATION: Chemical-Technological Institute imeni D.I. Mendeleyev, Moscow (Khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva, Moskva).

SUBMITTED: October [illegible], 1956

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, YU. YA.

75-1-22/26

AUTHORS: Kreshkov, A. P., ~~Mikhaylenko, Yu. Ya.,~~ Kirichenko, E. A.

TITLE: The Analysis of Silicon Organic Compounds of High Molecular Weight by Infrared Spectroscopy (Analiz vysokomolekulyarnykh kremniyorganicheskikh soyedineniy metodom infrakrasnoy spektroskopii)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol 13, Nr 1, pp 127-133 (USSR)

ABSTRACT: All hitherto known methods of investigating organosilicon compounds by means of infrared spectroscopy are based on the investigation of the infrared spectra of individual substances, where the absorption maxima found characterize certain chemical linkages and groupings of atoms in the molecules of the investigated compound. In an earlier paper the authors reported on the application of infrared absorption spectroscopy for the analysis of monomeric organosilicon compounds. The present article is devoted to the analysis of compounds of high molecular weight which are produced by the union of organosilicon compounds with polymeric organic compounds containing free hydro-

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xyl groups in their molecules. Substances were investigated which are obtained by a reaction between condensation products of glycerin and phthalic anhydride or of aniline and formaldehyde on the one hand and trimethylchlorosilane, dimethylchlorosilane and tetraethoxysilane on the other. In this connection it became evident that the chemical analysis according to the method by Verley causes a decrease in the number of free hydroxyl groups in the end products in comparison with any initial products containing hydroxyl groups. The silicon content of the end products was photocolometrically determined. It was found that by the method of infrared spectroscopy a number of analytic signs can be found which permit the determination of certain atom groupings and chemical bonds in the molecules of organosilicon compounds. Thus the structure of the obtained end products can also be determined and the character of the modification brought about by the chemical reaction can be judged. The corresponding measurements were performed in a spectrophotometer of the type ИКС-11. It was found that the absorption bands at 3 μ (3333 cm^{-1}) can serve as a reliable criterion for the qualitative and quantitative determination

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of hydroxyl groups in organosilicon compounds which do not contain any N-H bonds. When N-H bonds are contained in the compound to be investigated, their corresponding bands overlap at 3,00 μ (3333 cm^{-1}) with the band caused by the O-H bond. In such cases the determination of the hydroxyl groups according to this method is not possible. In all cases in which alkyl chlorosilane is taken as initial product a new absorption band at 9,5 - 9,6 μ (1050 - 1040 cm^{-1}) was found in the spectra of the end products which is absent in the initial products. The presence of this band can only be explained by the formation of a new atom grouping Si-O which shows in the result of the following chemical process:

$$R_kOH + ClSi(CH_3)_3 \xrightarrow{-HCl} R_k\text{-}OSi(CH_3)_3$$

R_k signifies a complicated organic radical. As the formation of the atom grouping Si-O is always accompanied by the formation of the absorption band at 9,5 - 9,6 μ in the spectrum, this band can serve as a criterion for the presence of the Si-O bond in complicated organosilicon compounds.

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The Analysis of Silicon Organic Compounds of High Molecular Weight by Infrared Spectroscopy 75-1-22/26

The spectrophotometer used for taking the infrared spectra is exactly described and the performance of the investigations as well. There are 3 figures, 9 tables, and 16 references, 7 of which are Slavic

ASSOCIATION: Moscow Chemical and Technological Institute imeni, D.I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva)

SUBMITTED: October 12, 1956

AVAILABLE: Library of Congress

1. Silicon compounds (Organic) - Infrared spectroscopy
2. Infrared spectroscopy - Applications

Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

AUTHORS: Kreshkov, A. P., Mikhaylenko, Yu. Ya., Shirenkina, I. I. 75-13-2-13/27

TITLE: Spectrophotometric Determination of Naphtalene, α- and β-Chloronaphtalene in the Ultraviolet Spectrum Range (Opredelenije naftalina, α- i β-khlornaftalina spektrofotometricheskim metodom v ul'trafioletovoy chasti spektra)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol. 13, Nr 2, pp. 242-245 (USSR)

ABSTRACT: As initial product for the synthesis of α-naphtyltrialkylsilanes serves technical α-chloronaphtalene, which besides small quantities of naphtalene also contains ~10% β-chloronaphtalene. As a consequence to this the products of the synthesis contain admixtures of α-naphtyltrialkylsilane apart from β-naphtyltrialkylsilane. The synthesis takes place at high temperatures and in presence of catalysts, which favour the isomerification of the α- and β-compounds. Consequently the percentage of α- and β-isomeres in the obtained products is dependent on the conditions of the performance of the synthesis. Therefore it is of practical interest to find a quantitative determination method for a

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Spectrophotometric Determination of Naphtalene, α- and β-Chloronaphtalene in the Ultraviolet Spectrum Range 75-13-2 15/27

mixture of naphtalene, α- and β-chloronaphtalene, α- and β-naphtyltrichlorosilane, and of α- and β-naphtyltriethylsilane. In this work a quantitative determination method for naphtalene and α- and β-chloronaphtalene beneath each other is worked out. Because of the resemblance of the chemical properties of the α- and β-isomers chemical methods are hardly applicable for the analysis of their mixtures. A determination on the basis of melting diagrams of the binary system α- and β-chloronaphtalene (references 1-3) was found to be difficult and inaccurate. Besides, the presence of free naphtalene in the mixture complicates this determination very much. The authors applied a spectrophotometric method in the ultraviolet domain of the spectrum for the analysis of mixtures of naphtalene and α- and β-naphtalines. In the ultraviolet range isomeric naphtalene derivatives show characteristic absorption bands (references 4,5). α-isomeres of naphtalene have an absorption band at 314 μm while this band in the case of β-isomeres is shifted and occurs at ca. 320 mμ. By this it is possible to identify every separate isomer in the mixture. Naphtalene itself has an adsorption band at 310 μm, which can serve for its identification. The

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Spectrophotometric Determination of Naphtalene, α- and β-Chloronaphtalene in the Ultraviolet Spectrum Range 75-13-2-16/27

adsorption measurements were taken on a quartz spectrophotometer of the type SF-4 in a solution of absolute alcohol. As the investigated components obey Beer's law in a concentration range from 1,10^{-3}mols/l to 5.10^{-3}mols/l for wave lengths of 310-320 μm, the formula for the relation between the optical density of the mixture and the optical densities of the components in a certain domain of the spectrum can be applied for the computation of the content of each separate component (ref. 7). It showed up that small admixtures of α-chloronaphtalene in the β-chloronaphtalene, which was used for the determination of the absorption coefficients of the pure components, impair the accuracy of the results only insignificantly. The computation of the percentage of each separate component by the system of equations, consisting of three equations, is given exactly.

Summary: For the quantitative spectrophotometric determination of naphtalene, α- and β-chloronaphtalene in the ultraviolet range of the spectrum the optical densities of the solutions in absolute ethanol are measured at 310, 314, and 320 mμ.

Card 3/4 There are 1 figure, 3 tables, and 7 references, 3 of which

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Spectrophotometric Determination of Naphtalene, α- and β- -Chloronaphtalene in the Ultraviolet Spectrum Range 75-13-2-16/27

are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical-Technological Institute imeni D. I. Mendeleyev)

SUBMITTED: October 31, 1956

1. Napthalenes--Determination 2. Napthalenes--Synthesis
3. Spectrophotometers--Performance 4. Ultraviolet spectrum

Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KRESHKOV, A.P.; MIKHAYLENKO, Yu.Ya.; MYSHLYAYEVA, L.V.; KHANANASHVILI, L.M.

Investigating the products of the reaction of some silicon organic compounds with water-alkaline solutions of aluminates, stannates, and plumbites by means of infrared absorption spectroscopy. Zhur.prikl. khim. 31 no.11:1746-1749 N '58. (MIRA 12:2)
(Silicon organic compounds--Spectra)
(Spectrum analysis)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

76-32-4-17/43

AUTHORS: Kreshkov, A. P., Mikhaylenko, Yu. Ya., Smirenkina, I. P.

TITLE: Investigation of the Ultraviolet Absorption Spectra of Some Organosilicon Compounds (Issledovaniye ultrafioletovykh spektrov pogloshcheniya nekotorykh kremniyorganicheskikh soyedineniy)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4, pp. 834 - 837 (USSR)

ABSTRACT: The ultraviolet absorption spectra within the range of from 220 - 320 mμ of the compounds tetramethoxy-, tetraethoxy-, tetrabutoxy-, tetraisoamyloxy-, tetramethyl- and tetraethylsilane, hexamethyldisiloxane and hexaethyldisiloxane, diphenyldioxysilane, 1,4-di(trimethylsilyl)-1,4-dihydronaphthalene, 1,4-di(triethylsilyl-1,4-dihydronaphthalene, 1,4-di(tributylsilyl - 1,4-dihydronaphthalene, α-naphthyltributylsilane, α-dinaphthyldiethylsilane were investigated and it was found that in the spectrum the absorption waves of the saturated organic radicals present in the compound, as there are, tetramethoxy, - tetra-

Card 1/2

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76-32-4-17/43

Investigation of the Ultraviolet Absorption Spectra of Some Organosilicon Compounds

ethoxy, etc. could not be observed. The determinations carried out with compounds with the phenyl group (270 mμ), hydronaphthalene group (281 mμ) and naphthalene group (312 mμ) showed the occurrence of the characteristic absorption bands and thus a means of determination of these groups in organosilicon compounds. Special experiments showed an accordance to the rule by Beer within the concentration range up to 0,15 g substance/1000 ml solvent. There are 3 figures, 4 tables and 4 references, 4 of which are Soviet.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Chemical Technological Institute imeni D. I. Mendeleyev)

SUBMITTED: December 25, 1956

AVAILABLE: Library of Congress

Card 2/2 1. Silicon compounds(organic)--Spectrographic analysis 2. Ultraviolet spectrum

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu. Ya.

Yu. Ya. Mikhaylenko, "The Infrared Spectroscopy of Silicon-Organic Compounds."

Report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1958.
Zhurnal prikladnoy khimii, 1959, Nr 1, pp 238-240 (USSR)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

S/153/60/003/004/029/040/XX
B020/B054

AUTHORS: Matveyev, M. A., Mikhaylenko, Yu. Ya.

TITLE: Study of the Structure of Hydrated Sodium Silicates by the Method of Infrared Spectroscopy

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya. 1960, Vol. 3, No. 4, pp. 715 - 717

TEXT: The authors attempted to determine the nature of water in sodium silicates hydrated in the vitreous and crystalline state on the basis of infrared absorption spectra of these silicates. Earlier, one of the authors (Refs. 3-5) had assumed that in the hydration of alkali silicates with water the latter enters their structure by way of hydration of the alkali-metal ion, while a hydrated shell is formed around the respective ion, which determines the degree of hydration of these silicates and other physicochemical properties. It was also shown (Ref. 5) that the hydration of alkali silicates proceeds according to the following general equations:

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Study of the Structure of Hydrated Sodium Silicates by the Method of Infrared Spectroscopy

S/153/60/003/004/029/040/XX
B020/B054

a) $R_2Si_nO_{2n+1} + xH_2O \longrightarrow [R(OH_2)_x]_2Si_nO_{2n+1}$

b) $R_2Si_nO_{2n+1} + (x+y)\,[H^+, OH^-] \longrightarrow [HyR_{2-y}(OH_2)_x]\,Si_nO_{2n+1} \cdot yROH$

Specially synthesized samples of vitreous and crystalline sodium silicate were investigated. The synthesis of these silicates and the factors characterizing their structure and physicochemical properties are described in Ref.3. The infrared absorption spectra were taken by an ИКС-11 (IKS-11) spectrophotometer of crystalline $Na_2O \cdot 3SiO_2$, crystalline hydrated $Na_2O\ 3SiO_2$, vitreous $Na_2O\ 3SiO_2$ and vitreous hydrated $Na_2O \cdot 3SiO_2$. The absorption curves obtained are given (Fig.). For hydrated vitreous and crystalline sodium silicates, the authors found a characteristic band at 6 μ (1667 cm^{-1}) corresponding to the water molecule, which proves that in the hydration of vitreous and crystalline alkali silicates water is chemically added by way of hydration of the ions of the modifiers entering the structure of these silicates

Card 2/3

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Study of the Structure of Hydrated Sodium Silicates by the Method of Infrared Spectroscopy

S/153/60/003/004/029/040/XX
B020/B054

V. A. Florinskaya and R. S. Pechenkina (Ref.1) are mentioned. There are 1 figure and 9 references: 6 Soviet, 1 US, 1 Austrian, and 1 French.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im D. I. Mendeleyeva, kafedra obshchey tekhnologii silikatov (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev, Department of General Silicate Technology)

SUBMITTED: February 21, 1959

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

MIKHAYLENKO, Yu.Ya.; LEBEDEV, N.N.; KOLCHIN, I.K.

Determination of the isomers of cymene and tert.butyltoluene by infrared absorption spectra. Zhur.anal.khim. 15 no.2:159-162 Mr-Ap '60. (MIRA 13:7)

1. Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva.
(Cymene--Spectra) (Toluene--Spectra)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

S/075/60/015/004/023/030/XX
B020/B064

AUTHORS: Mikhaylenko, Yu. Ya., Lebedev, N. N., Kolchin, I. K., and Kutyrina, Ye. G.

TITLE: Analysis of Multicomponent Mixtures From Infrared Absorption Spectra. Information 2. Determination of the Isomers of Chloro Cumenes, Tertiary Butyl Benzenes, and Chloro Diphenyl Methanes

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 4, pp. 495 - 499

TEXT: The analysis is described in detail in the previous publication of this series (Ref. 1). The spectrophotometer ИКС-11 (IKS-11) was used with bulbs of sylvine 0.09 cm thick and with specially purified carbon disulfide as a solvent (Ref. 2). Calibration was made by determining the extinction coefficients of every aromatic compound for every wavelength used. The o-, m-, and p-isomers of chloro cumene, tertiary butyl chloro benzene, and chloro diphenyl methane

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Analysis of Multicomponent Mixtures From Infrared Absorption Spectra Information 2 Determination of the Isomers of Chloro Cumenes, Tertiary Butyl Benzenes, and Chloro Diphenyl Methanes

S/075/60/015/004/023/030/XX
B020/B064

were used for calibration Chloro cumene and butyl chloro benzene were obtained by the Grignard reaction from the respective bromo-chloro benzene isomer and alkyl bromide using n-heptane instead of absolute ether as a solvent (Ref 3) The chloro diphenyl methane isomers resulted from the condensation of the respective chloro benzyl chloride with benzene in the presence of $AlCl_3$ The constants of the compounds are given in Table 1 First, all compounds were qualitatively analyzed to determine the absorption maxima of the isomers To find the absorption bands of the individual isomers the data published on disubstituted benzene derivatives were used i e the band at 770 - 740 cm^{-1} is characteristic of the ortho-disubstituted derivatives, the bands at 800 - 770 cm^{-1} and 710 - 690 cm^{-1} of the meta-disubstituted derivatives, and the band at 833 - 780 cm^{-1} of the para-disubstituted derivatives (Refs 8, 9) Figs 1 and 1

Card 2/4

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Analysis of Multicomponent Mixtures From Infrared Absorption Spectra Information 2 Determination of the Isomers of Chloro Cumenes Tertiary Butyl Benzenes and Chloro Diphenyl Methanes

S/075/60/015/004/023/030/XX
B020/B064

show the absorption spectra of the chloro-alkyl benzene isomers studied. The absorption band lying in the range for p-, m-, and o-disubstituted benzenes are obtained on the curves The wavelengths most convenient for determining the isomers are given Moreover, the absorption curves show absorption maxima at 1037 and 1100 cm^{-1} which may be due to the vibrations of the benzene cycle (Ref 9) The optical density of each compound in CS_2 solution was measured and the extinction coefficients were calculated for each wavelength Tables 2, 3, and 4 give the results Since the Lambert - Beer law does not hold for the solutions examined it was necessary to employ the method of successive approximations in determining the composition of mixtures just as in Ref 1. The results of an analysis of artificial mixtures showed that the mean error is approximately 4% There are 3 figures, 4 tables and 10 references: 4 Soviet 2 German 3 US, and 1 French

Card 3/4

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

Analysis of Multicomponent Mixtures From Infrared Absorption Spectra. Information 2. Determination of the Isomers of Chloro Cumenes, Tertiary Butyl Benzenes and Chloro Diphenyl Methanes

S/075/60/015/004/023/030/XX
B020/B064

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im D I Mendeleyeva (Moscow Institute of Chemical Technology imeni D I Mendeleyev)

SUBMITTED: September 13, 1958

Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KRESHKOV, Anatoliy Pavlovich. Prinyali uchastiye: VIL'BERG, S.S., dotsent, kand. khim. nauk; MIKHAYLENKO, Yu.Ya., dotsent, kand. khim. nauk; YAROVENKO, A.N., dotsent, kand. khim. nauk; STUPNIKOVA, N.I., red.; SHPAK, Ye.G., tekhn. red.

[Principles of analytical chemistry; qualitative and quantitative analysis] Osnovy analiticheskoi khimii; kachestvennyi i kolichestvennyi analiz. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry. Book 2. [Quantitative analysis] Kolichestvennyi analiz. 1961. 552 p. (MIRA 14:10)

(Chemistry, Analytical--Quantitative)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KRESHKOV, Anatoliy Pavlovich. Prinimali uchastiye: VIL'BORG, S.S., dots., kand. khim. nauk; MIKHAYLENKO, Yu.Ya., dots., kand. khim. nauk; YAROVENKO, A.N., dots., kand. khim. nauk; STUPNIKOVA, N.I., red.; SHPAK, Ye.G., tekhn. red.

[Principles of analytical chemistry; qualitative and quantitative analysis] Osnovy analiticheskoi khimii; kachestvennyi i kolichestvennyi analiz. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry. Book 1. [Theoretical principles. Qualitative analysis] Teoreticheskie osnovy, kachestvennyi analiz, 1961. 635 p. (MIRA 14:9)
(Chemistry, Analytical--Qualitative)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

42953

S/081/62/000/022/060/088
B166/B144

15 81.0

AUTHORS: Kreshkov, A. P., Mikhaylenko, Yu. Ya., Rybal'chenko, M. A.

TITLE: Quantitative analysis of epoxy resins

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 479, abstract 22P18 (Vestn. tekhn. i ekon. inform. N.-i. in-t tekhn.-ekon. issled. Gos. kom-ta Sov. Min. SSSR po khimii, no. 9, 1961, 26-29)

TEXT: The method for the quantitative determination of epoxy groups (EG) is based on the dependence of the 912 cm^{-1} (10.96μ) absorption band intensity in the IR region on the EG content of resins. Free phenol is used as the internal standard, in such a quantity that its concentration is constant in comparison with that of the EG. The EG content was determined from a calibration curve: ratio of the optical density of the epoxy and phenyl groups - percentage EG content in the resins. A table gives coinciding results for the quantity of EG in modified and in unmodified epoxy resins as obtained by chemical and by spectral analysis. [Abstracter's note: Complete translation.]

Card 1/1

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 12976-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pc-4/Pr-4 RM/WW

ACCESSION NR: AT3002349 S/2513/63/013/000/0383/0388 66

65

AUTHOR: Mikhaylenko, Yu. Ya.; Senatskaya, L. P.; Kuty*rina, Ye. G.

TITLE: Quantitative determination of double bonds in unsaturated organosilica compounds by infrared spectral absorption

SOURCE: AN SSSR. Komissiya po analiticheskoy khimii. Trudy*, v. 13, 1963. Organicheskiy analiz, 383-388

TOPIC TAGS: double bond, unsaturated hydrocarbon, organosilica compound, IR spectra, vinyltriethoxysilane, divinyltetraethoxydisiloxane

ABSTRACT: An attempt is made to develop a direct and quick method for the determination of double bonds in unsaturated organosilica compounds which would give reliable results. A quantitative method has been proposed for the above determination by employing the infrared absorption spectra. It was found that the band 940-960 cm sup -1 can be used in the determination of double bonds in organosilica compounds the same way as the determination of double bonds in other hydrocarbons. Vinyltriethoxysilane and divinyltetraethoxydisiloxane were synthesized and used as standards. The infrared analysis agree well with chemical analysis. The relative error by infrared analysis is plus or minus 0.7%. Orig. art. has: 3

Association: Moscow Inst. of Chemical Technology, Dept. of Analytical Chemistry.

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 18958-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pc-4/Pr-4 RM/WW/MAY

ACCESSION NR: AP3006540 S/0191/63/000/009/0044/0047 67

AUTHORS: Kreshkov, A. P.; Mikhaylenko, Yu. Ya.; Senetskaya, L. P.; Uklonskiy, D. A.

TITLE: Determining vinyl groups in monomers and polymers of organosilicon compounds by the infrared spectroscopic method.

SOURCE: Plasticheskiye massy*, no. 9, 1963, 44-47.

TOPIC TAGS: organosilicon monomer, polymer, vinyl group, infrared, spectroscopy, methylvinyldichlorosilane, tetramethyldivinyl siloxane.

ABSTRACT: Method presented for the quantitative determination of vinyl groups in organosilicon compounds is based on calculating the mean integral of absorption in the IR region associated with deformed vibrations of the vinyl group. The vinyl integral coefficient values practically coincide in methylvinyldichlorosilane and its hydrolysis products at 3.94×10^{5} mol^{-1} cm^{2}. The method was applied to

Card 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

L 18958-63

ACCESSION NR: AP3006540

determination of vinyl composition with a relative error of ±5% in mixtures of methylvinyldichlorosilane and dimethyldichlorosilane and in polymers based on these mixtures as well as in tetramethyldivinyl siloxane. Orig. art. has: 5 tables and 2 equations.

ASSOCIATION: none.

SUBMITTED: 00 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: CH, MA NO REF SOV: 008 OTHER: 009

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1

KREŠHKOV, A.P.; MIKHAYLENKO, Ye.Ia.; MIKHAILOV, Ye.A.

Spectral determination of silicon in monomeric and polymeric organosilicon compounds. Zav. lab. 30 no.5:555-556 '64. (MIRA 17:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930001-1"