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PROCESSES AND PROPERTIES INDEX

Effective cross-section in the recombination of atoms on irradiation. A. N. TERENIN and N. A. [illegible]EVA (J. Phys. Chem. U.S.S.R., 1934, 5, [illegible]). — A theoretical expression is given for the rate of recombination. The recombination of atoms formed from a diat. mol. has a probability of the order of 10^{-4}—10^{-6}. Data for Cl_2, HBr, HI, TlI, and NaI are discussed. CH. ABS. (e)

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

BC

Photo-dissociation of the vapours of some organo-metallic compounds. A. Terenin and N. [illegible] (Acta Physicochim. U.R.S.S., 1935, 2, 75[illegible]). The absorption spectra of $HgMe_2$, $ZnMe_2$, $PbMe_2$, $HgMeI$, and $HgMeBr$ were all continuous and at $\lambda <$ approx. [illegible] A. For $HgMe_2$ diffuse bands at [illegible] A. were also observed. Photo-dissociation occurs at the metal-C linking. Zn and Pb were deposited on irradiating $ZnMe_2$ and $PbMe_2$ with light of $\lambda <$ [illegible] and [illegible] A., respectively. On illuminating the vapours of $HgMeI$ and $HgMeBr$, the band fluorescence of HgCl and HgBr was observed, showing these mols. to be liberated in an excited state by photo-dissociation. H. J. E.

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BC

A-1

Fluorescence and absorption spectra of simple aromatic amines. N. Pelbarazva and R. Tschubarov (Acta Physicochim. U.R.S.S., 1935, 1, 777—784).—The absorption and fluorescence spectra of NH_2Ph and $NHPh_2$ have been photographed. For each the absorption bands are in the region of [illegible] Å. (C_6H_6 absorption) and at < [illegible] Å. (NH_3 absorption). The bands for $NHPh_2$ are diffuse. H. J. E.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

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1ST AND 2ND LETTER

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

A-1

BC

Anti-Stokes [illegible] N. [illegible] (Acta Physicochim. [illegible] 1, 785—794).—The anti-Stokes [illegible] [illegible] max. [illegible] and [illegible] The spectral region [illegible] A. (max. [illegible]). The excitation mechanism is discussed. On [illegible] mixture of [illegible] and [illegible] indicating a [illegible] H. J. E.

COMMON ELEMENTS

COMMON VARIABLES INDEX

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3RD AND 4TH ORDERS

SA

A 53
bt.

4962. Energy Transfer in Collisions of Excited Thallium Atoms with Gas Molecules. N. Prilechajewa. *Acta Physicochimica*, 2, 5, pp. 647–664, 1935. *In German.*—The quenching effect of N_2, O_2, H_2, CO_2, CO, H_2O, molecules and atoms on the emission of the green Tl line (5351 Å) has been investigated, the excited Tl being obtained from photo-dissociation of TlI molecules. The effective cross-section for the quenching process is of the order 10^{-15} cm.^{2} and in the case of O_2 and CO_2 depends on the velocity of the excited Tl atoms. In these two cases the process is interpreted as a chemical change leading to the formation of TlO molecules. The collisions with the other gases are of the second kind with energy transference to the vibrational and rotational energy of the colliding partners. Hydrogen produces no quenching. After a summary of all the known data on the quenching of Na, Hg and Tl fluorescence, conclusions are drawn as to the probability of energy transfer. The dependence of the cross-section on the velocity is explained in terms of the potential curves of the systems. J. E.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

a-1

Emission of aromatic compounds containing the carbonyl group. N. PHILIMONOVA. (Acta Physicochim. U.R.S.S., 1935, 3, 195—201).—In the fluorescence of PhCHO and COPhMe vapours the excitation is primarily localised in the C_6H_5 ring, whereas the subsequent emission is localised in the CO group. O. J. W.

COMMON ELEMENTS

COPPER

MATERIALS INDEX

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BC

2-1

Free radicals in the dissociation of gaseous metal alkyls by light. N. A. PHILIPPEAEVA and A. N. TERENIN (J. Phys. Chem. Russ., 1936, 8, 111—116).—Paneth's method of detecting free radicals is further developed by using a light beam and a photo-cell to measure the velocity of dissolution of the mirror. It is applied to detect radicals formed by photo-decomp. of $CO(Me)_2$, $HgMe_2$, and $PbEt_4$. The max. production of radicals from $HgMe_2$ occurs at 2300 A., where diffuse predissociation bands were described previously. $HgMe_2$ gives about 5 times as many radicals as $PbEt_4$.

E. R.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

Selective extinction of continuous fluorescence spectra. N. PRILEZHAEVA (Acta Physicochim. U.R.S.S., 1937, 7, 149—162).—Max. extinction of the continuous fluorescence of PhMe, PhEt, PhOH, and NH_2Ph by N_2 and CO occurs at the frequencies corresponding with the vibration levels of the latter gases. With H_2 max. extinction occurs at 2800 A., corresponding with the dissociation of H_2 into atoms. With CO_2 and H_2O two max. occur, probably corresponding with the energy of activation of the unimol. decomp. of these mols. No selective extinction was observed with O_2 and NH_3. Selective extinction is attributed to a kind of Raman effect through collisions of the second kind. J. W. S.

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2a

A 53
1

4930. **Sensitised Fluorescence of Aniline in Benzene Vapour.** N. Prilezhajewa and A. Klimowa. *Acta Physicochimica*, 7, 2, pp. 163-170, 1937. *In German.*—The process of sensitised fluorescence is regarded as associated with the intersection of the potential curves of the two systems $A + B^{*} \rightarrow A^{*} + B$. From this view-point the reverse process is to be expected if the required energy balance is available from any existing energy source. This reverse process corresponds to an anti-Stokes fluorescence. These two processes have been followed in the cases of aniline and benzene mixtures in line with the formerly discovered anti-Stokes emission of aniline and indigo vapour. J. F.

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BC

Absorption spectra and chemical processes in gas discharges. N. PHILIPPANNA and H. NORTHER (Acta Physicochim. U.R.S.S., 1937, 7, 811—824).—Chemical processes can conveniently be studied by examination of absorption spectra, together with the emission spectra during the reaction and the fluorescence spectra of the end products. In this way several org. reactions have been studied in the high-frequency discharge. W. R. A.

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BC

17-1

Selective extinction of continuous fluorescence spectra. N. A. PRILEZHAEVA (J. Phys. Chem. Russ., 1937, 10, 342—352).—The intensity of ultra violet fluorescence of the vapours of PhMe, PhEt, PhOH, and NH_2Ph at 0·1 to 10 mm. Hg is uniformly lowered by admixture of small (<5 mm.) or large (>25 mm.) amounts of N_2, CO, H_2, CO_2, or H_2O. Moderate admixtures show selective extinction (position independent of the vapour). N_2 quenches between 3340 and 3320, 3120 and 3110, 2950 and 2920, and 2800—2790 A., CO between 3420 and 3410, 3235 and 3215, 3050 and 3040, and 2915 and 2895 A., H_2 between 3020 and 3010, and 2810 and 2800 A., CO_2 between 2830 and 2815 A., H_2O between 2975 and 2960 A. O_2 and NH_3 do not extinguish. An explanation is given for the position of the extinction bands. J. J. B.

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BC

A-1

Sensitised fluorescence in benzene and aniline vapours. N. A. PRILESHAEVA and A. A. KLIMOVA (J. Phys. Chem. Russ., 1937, 10, 353—359).—C_6H_6 and NH_2Ph vapours fluoresce when irradiated with λ between 2300 and 2600 A. and between 2500 and 2850 A., respectively. When mixed with C_6H_6, however, NH_2Ph fluoresces even at <2500 A., and C_6H_6 does so at 2800 A. when mixed with NH_2Ph. The source of the energy necessary for the "anti-Stokes" fluorescence of C_6H_6 is unknown. J. J. B.

METALLURGICAL LITERATURE CLASSIFICATION

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BC

Photochemical decomposition of adsorbed acetone. V. KUDRJAVTSEVA and N. PRILEZHAEVA (Acta Physicochim. U.R.S.S., 1936, 5, 211—226).—The photochemical decomp. of $COMe_2$ adsorbed on Bi and Sb layers has been investigated in the ranges 3200—2500 A. and <1950 A., in which $COMe_2$ absorbs, by irradiating a thin mirror of the metal on which the $COMe_2$ is adsorbed. The rate at which the mirror is removed by the free CH_3 produced by photochemical decomp. of $COMe_2$ at different parts of the spectrum was determined. In both λ ranges the absorption limit was displaced in the direction of longer λλ compared with gaseous $COMe_2$, the displacement being caused by a decrease of the distance between the electronic levels in the adsorbed mols.

A. J. M.

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BC

H 1

Absorption spectra and chemical processes in discharges. N. Prileshaeva and G. Neter (J. Phys. Chem. Russ., 1938, 11, 254—261).—An attempt is made to identify the reaction products by observing the absorption spectra of gas mixtures before, during, and after the discharge. Thus, NH_2Ph is shown to be formed from C_6H_6 and NH_3, C_6H_6 from $PhNO_2$ and H_2, PhOH from C_6H_6 and H_2O, PhCHO from C_6H_6 and CO, and C_6H_6 from PhCHO. Fluorescence spectra reveal the reaction $C_6H_6 + CH_4 \rightleftharpoons PhMe + H_2$. No formation of NH_2Ph from PhOH and NH_3, or of C_6H_6 from PhOH and H_2, can be detected.

J. J. B.

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

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BC

W. R. A.

Photochemical decomposition of benzene vapour. I. G. I. KRASSINA. II. N. A. PRILESHAEVA (Acta Physicochim. U.R.S.S., 1939, 10, 189—192, 193—198).—I. The photodissociation of C_6H_6 vapour according to $C_6H_6 + h\nu \rightarrow Ph + H$ has been established by detecting at. H. Of λλ 1850—2300 A. the range 1850—2000 A. is the most effective.

II. The increase in H_2 pressure with time due to the recombination of at. H has been investigated. For the ranges 1850—2000 A. and 2000—2150 A. the no. of C_6H_6 mols. dissociating per sec. is $1{\cdot}55 \times 10^{13}$ and $0{\cdot}29 \times 10^{13}$ respectively. Assuming that λλ 1990—2150 A. cause predissociation whilst λλ < 1990 A. produce direct decomp., the probability of direct decomp. is five times that of the predissociation process.

C. R. H.

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DRILEZHAYEVA, N. A.

"The Photochem. Decompostion of Benzene Vapors -- II": 13, No. 4, 1939; Siberian Physico-Tech. Insti. Lab. of Spectroscopy, Tomsk; Rec 29 June 1938.

Report U-1613, 3 Jan. 1952.

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3RD AND 4TH ORDERS

Absorption spectra and electronic state of molecules in interaction processes. N. A. Prilezhaeva (Siberian Phys.-Tech. Inst. at the Tomsk State Univ., Spectroscopical Lab.). *Bull. acad. sci. U.R.S.S., Sér. phys.* 9, 211-13(1945)(in Russian).--Iodine in certain solvents shows an absorption max. around 5800 A., in others at about 4700 A. The first class comprises hexane, benzene, toluene, CS_2, $CHCl_3$, nitrobenzene; the 2nd, EtOH, PrOH, Me_2CO, acetophenone, pyridine, water. No solvents are known in which the max. would have an intermediate position. A study was made of the absorption spectrum of iodine adsorbed on CaF_2 and also on NH_4Cl aerosol. In this case, the absorption of gaseous iodine is enhanced, owing no doubt to the lengthening of the path of the light through repeated reflections on the crystals of the disperse phase; a second max. is found coinciding with the max. shown by solns. in the solvents of the second class, finally increasing absorption in the direction of shorter waves, in analogy with solid iodine. Ammonia adsorbed on NH_4Cl aerosol shows absorption between 3100 and 2400 A., in which region also lies the max. of its photochem. decompn. on various other adsorbents ($CuSO_4$, CdI_2, MgO, Cu, glass); it had also been shown that the threshold wave length of photochem. decompn. of acetone does not practically vary with the nature of the adsorbent. Preliminary expts. show that CO_2 adsorbed on solid benzene plates acquires absorption in the region of 3000 A. which is characteristic of the carbonyl group. The data point to a regrouping of the outer electron configuration of the mol. on adsorption. N. Thon

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

7

Simple method of visual quantitative analysis. N. A. Prilezhaeva and O. P. Semenova. *Bull. acad. sci. U.S.S.R.; Sér. phys.* 9, 769-71(1945). The lines of a homologous pair are projected simultaneously with a continuous spectrum of an incandescent lamp at a voltage regulated by a rheostat; the brightness of the lamp is thus changed in a measurable manner. The error may be 10% in detg. Si in ferrosilicon and in Cu, Pb, and Zn detns. against Fe as a const. electrode. S. Pakswer

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3

Concentration and distribution of electrode material in the arc and the spark discharge. N. A. Prilezhaeva, N. K. Rubtsova, and V. P. Sychev (Siberian Phys.-Tech. Inst. Tomsk Univ.). *Bull. acad. sci. U.R.S.S., Sér. phys.* 11, 239–45(1947).—The radiation emitted in an arc discharge between Cu electrodes was absorbed in an arc or a spark discharge between Cu or Ag-Cu (10%) electrodes. The ratios of the duration of excited states τ_{5010}/τ_{5105} and τ_{5153}/τ_{5105} were found to be in good agreement with previously published results. The distribution of Na in a C arc and of Al or Ag in a Cu arc show that, along with diffusion, field action of pos. ions is very considerable.

In a spark discharge the distribution depends on diffusion

S. Pakswer

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PRILEZHAYEVA, N. A.

USSR/Physics
Electrons

Jul/Aug 48

"Influence of External Factors on the Probability of Electron Transitions," N. A. Prilezhayeva, B. N. Gul'ko, V. I. Danilova, Siberian Physicotech Inst, Tomsk State U imeni V. V. Kuybyshev, 3 pp

PA 53/49T87

"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 4, p 362

Introduces examples of influence of a constant external electric field, influence of a nonhomogeneous intermolecular field, and influence of collisions with neutral particles upon the probability of electron transitions. Examples show that probability of

[redacted]

53/49T87

USSR/Physics (Contd)

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electron transition is not an absolutely invariant atomic or molecular constant.

[redacted]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, N. A.

USSR/Physics - Discharge, Arc Nov/Dec 50

"Determining the Concentration of Na Atoms in the Positive Column of the Arc Discharge," N. A. Prilezhayeva, V. N. Goryachev, Siberian Physicotech Inst, Tomsk State U imeni Kuybyshev

"Iz Ak Nauk SSSR, Ser Fiz" Vol XIV, No 6, pp 732-5

Studies concentration of Na atoms vs concentration of NaCl and sodium borate glass in electrodes. Finds atmospheric gases comprise 90-95% of arc gases, thus present notions on

170T93

USSR/Physics - Discharge, Arc (Contd) Nov/Dec 50

effective ionization potential, line intensity vs concentration and temperature, and equilibrium must be reviewed.

170T93

FA 170T93

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

10047. Probability of radiationless transitions in the predissociational region of molecular spectra. N. A. PRILEZH-EYA [illegible] SSSR [illegible]

[illegible]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

KOKHANENKO, V.V.; PRILEZHAYEVA, N.A.; CHERNENKO, L.A.

Effect of CO on N_2 radiation in a glow discharge. Izv.vys. ucheb.zav.; fiz. no. 2:73-76 '64. (MIRA 17:6)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

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PRILEZHAYEVA, N.A.

POPOVA, T.N.; PRILEZHAYEVA, N.A.

Investigation of the distribution of molecules by their vibration conditions in glow discharges. Izv. AN SSSR Ser. fiz. 19 no.1: 20-21 Ja-F '55. (MLRA 8:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva
(Spectrum analysis) (Spectrometer)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, N.A.

Photochemical decomposition of the vapors of benzene and of its derivatives [with English summary in insert] Zhur.fiz.khim.30 no.5:1044-1047 My '56. (MLRA 9:9)

1.Tomskiy gosudarstvennyy universitet imeni V.V.Kuybysheva i Sibirskiy fiziko-tekhnicheskiy institut.
(Photochemistry) (Benzene)

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PRILEZHAYEVA, N.A.

Estimation of the effect of secondary processes on the radiation intensity of glowing discharge. Izv. vys. ucheb. zav.; fiz. no.3: 3-12 '58. (MIRA 11:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva.
(Electric discharges through gases)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, N.A.

Effect of collisions of the second kind on emission intensity in a glow discharge. Fiz.sbor. no.4:76-80 '58. (MIRA 12:5)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva.
(Electric discharges through gases)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

AUTHORS: Danilova, V. I., Gol'tsev, V. D., SOV/[illegible]
Prilezhayeva, N. A.

TITLE: Spectroscopical Investigations of the Intermolecular and Intramolecular Interaction of the Nitro- and Amino Groups in Some Benzene Derivatives (Spektral'nyye issledovaniya mezhmolekulyarnogo i vnutrimolekulyarnogo vzaimodeystviya nitro- i aminogrupp v nekotorykh proizvodnykh benzola)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol 22, Nr 9, pp 1054 - 1057 (USSR)

ABSTRACT: The presence of atom groups of opposite polarity in two different molecules leads, under certain conditions, to the formation of complexes. These complexes are bound together by electrostatic forces. In spectroscopical analyses a displacement of the absorption bands or even the formation of new bands can be observed in such cases. The authors carried out a comparative investigation of the interaction of the amino- and of the nitro group with the aniline- and nitro benzene molecules as examples. They also investigated these groups in nitro aniline. Accordingly the present paper consists of 2 sections:

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Spectroscopical Investigations of the Intermolecular and Intramolecular Interaction of the Nitro- and Amino Groups in Some Benzene Derivatives SOV/48-22-9-11/41

a)Spectroscopical investigation of the system aniline-nitro-benzene and b)spectroscopical investigation of the nitro-aniline molecules. The investigations lead to the following conclusions: It has been shown that in the system aniline - nitrobenzene complex compounds of a 1:1 composition are forming. The stability of the binding in these complexes is about 0,6 kcal per mol. As a consequence of the complex formation the absorption maximum of benzene shifts from 3550 to 4300 Å. This shift is caused by a strengthening of the intermolecular binding during the excitation of the nitrobenzene molecule (Ref 6). The intramolecular binding between the groups NH_2 and NO_2 is strengthened in the molecules of the nitro-anilines at a transition from the para- to the meta- and ortho-isomer. The maximum of absorption shifts according to certain rules towards the longer waves. The displacement of the absorption maxima of the nitro-aniline isomers as well as in the system aniline-nitro benzene is caused by the stronger interaction

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

Spectroscopical Investigations of the Intermolecular and SOV/48-22-9-11/46
Intramolecular Interaction of the Nitro- and Amino Groups in Some Benzene Derivatives

occurring at an excitation of the molecule. The sum of experience gained permits to assume that the nature of the inter- and intramolecular interaction is the same in the NH_2- and NO_2-groups. There are 3 figures, 3 tables, and 6 references, 2 of which are Soviet.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gos. universitete (Siberian Physical-Technical Institute at the Tomsk State University)

Card 3/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

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PHASE I BOOK EXPLOITATION SOV/4959

Ural'skoye soveshchaniye po spektrosk

Materialy 2 Ural'skogo soveshchaniya po spektroskopii, Sverdlovsk, 1958 g. (Materials of the Second Urals Conference on Spectroscopy, Held in Sverdlovsk, 1958) Sverdlovsk, Metallurgizdat, 1959. 206 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Ural'skiy filial Akademii nauk SSSR. Komissiya po spektroskopii and Ural'skiy dom tekhniki VSNTO.

Eds.: [illegible] Borisovich Shayevich and Gennadiy Pavlovich Shornyakov; Tech. Ed.: [illegible] M. [illegible].

PURPOSE: This collection of articles is intended for spectral analysis laboratory workers at ferrous and nonferrous metallurgical plants, and for laboratory personnel of the metal-working industry, geological and prospecting organizations, and similar scientific research laboratories.

Card 1/9

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COVERAGE: The collection contains papers read at the Second Urals Conference on the spectral analysis of ferrous and nonferrous metals and alloys, slags, ores, agglomerates, refractories and other materials used in industry. The material of the conference includes articles on the analysis of steels (including the determination of gases), ferroalloys, nonferrous and light metals and alloys, pure noble metals, etc. The present volume is intended to disseminate the latest experience in working with spectral laboratories, and to report on the results of scientific research. The author thanks R. I. Gutkina and Yu. M. Buravlev. Almost all of the articles are accompanied by references.

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Semenova, O. P., and N. A. Prilezhayeva. Effect of Third Elements on the Intensity of Spectral Lines 5

Skornyakov, G. P., and O. D. Frenkel'. Role of the Interelectrode Gap in the Evaporation of Electrodes 10

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

ROZHKOV, P.I., laureat Stalinskoy premii, otv.red.; PSHENITSYN, N.K., retsenzent; ZVYAGINTSEV, O.Ye., prof., doktor khim.nauk, retsenzent; PRILEZHAYEVA, N.A., prof., doktor fiz.nauk, retsenzent; ANISIMOV, S.M., prof., red.; SHULAKOV, P.G., red.; SEMENOVA, N.Ya., red.; GUT'KOV, A.D., red.; DOLGIKH, V.I., red.; KAMAYEVA, O.M., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Methods of analyzing platinum metals] Metody analiza platinovykh metallov, zolota i serebra; sbornik nauchnykh trudov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 256 p. (MIRA 13:9)

1. Russia (1917- R.S.F.S.R.) Krasnoyarskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. 2. Chlen-korrespondent AN SSSR (for Pshenitsyn).
(Platinum--Analysis) (Gold--Analysis)
(Silver--Analysis)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

L 33191-66 EWT(1)/EWT(m)/EWP(j) IJP(c) RM

ACC NR: AR6016175 SOURCE CODE: UR/0058/65/000/011/D013/D013

AUTHOR: Danilova, V. I.; Zubkova, L. B.; Morozova, Yu. P.; Pnomareva, O. A.; Prilezhayeva, N. A.; Terpugova, A. F.; Filippova, L. G. Foronova, R. M.

TITLE: Influence of intra- and intermolecular interaction on the energy levels, electron spectrum, and color properties of complex molecules

41
B

SOURCE: Ref. zh. Fizika, Abs. 11D91

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 327-335

TOPIC TAGS: molecular interaction, complex molecule, electron energy level, electron spectrum, conjugate bond system, hydrogen bonding

ABSTRACT: The intramolecular interaction (effect of conjugation, external-field interaction between donor-acceptor groups, hydrogen bond, etc.) were investigated for molecules of di- and polysubstitutes of benzene (for 20 compounds). An interpretation of the observed phenomena is presented. Similar investigations were made for the intermolecular interaction in different solvents (for 20 systems) and for complex formation processes (10 systems). General laws of the influence of the indicated processes on the electron levels are formulated and the changes of the spectra are interpreted. [Translation of abstract]

SUB CODE: 20, 07

Card 1/1 mc

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

CHERNENKO, L.A.; TRILEZHAYEVA, N.A.

Estimate of the absolute value of the effective cross section of collisions of the second kind in N_2 + Ar, CO + Ar, and N_2 + CO mixtures based on the molecular band intensification in a glow discharge. Zhur. prikl. spekt. 3 no.1:9-13 Jl '65. (MIRA 18:9)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

CHERNENKO, L.A.; MURAV'YEV, I.I.; PRILEZHAYEVA, N.A.

Study of a glow discharge in the mixture He + Ne. Izv. vys. uchebn. zav.; fiz. 8 no.3:168-169 '65. (MIRA 18:9)

1. Sibirskiy fiziko-tekhnicheskiy institut imeni V.D.Kuznetsova.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

L 62239-65 EWT(1)/EPA(s)-2/EPA(w)-2/EWA(m)-2

ACCESSION NR: AP5018839

UR/0368/65/003/001/0009/0013
537.53:535.2

22
21
B

AUTHOR: Chernenko, L. A.; Prilezhayeva, N. A.

TITLE: Estimate of the absolute value of the effective cross section for collisions of the second kind in the mixtures N_2 + Ar, CO + Ar, and N_2 + CO from measurements of the amplification of the molecular bands in a glow discharge 21

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 1, 1965, 9-13

TOPIC TAGS: sensitized fluorescence, glow discharge, level population, molecular collision, spontaneous emission, excitation probability

ABSTRACT: The absolute effective cross sections for collisions of the second kind were investigated for the case when both components of a non-equilibrium electric discharge in a two-component mixture are excited simultaneously. Under these conditions the role of the collisions of the second kind can be determined, for example, by measuring the relative amplification of the lines or molecular bands due to component B (in a mixture A + B) as a function of the partial pressures of mixtures of different components. The connection between the change in the intensity and the probability of collisions of the second kind is briefly analyzed theoretically. The increase in intensity due to the collisions is found to be proportional to the metastable concentration and to the absolute cross section. The

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L 62239-65

ACCESSION NR: AP5018839

values obtained for the cross sections were 3×10^{-15}, 0.8×10^{-15}, 2×10^{-15}, and 0.3×10^{-15} for the mixtures $N_2(C^3\Pi)_{v'=3}$--$Ar(^3P_0)$, $N_2(C^3\Pi)_{v'=2}$--$Ar(^3P_2)$, $N_2(C^3\Pi)_{v'=0}$--CO, and $CO(C^3\Pi)_{v'=0}$--$Ar(^3P_2)$, respectively. The data are in good agreement with those published by others. The conclusion is that to calculate the probability of collisions of the second kind in a given mixture it is necessary to analyze separately the possible elementary processes in the particular case. "The authors thank V. S. Mel'chenko for discussing the results of the work." Orig. art. has: 2 figures, 5 formulas, and 1 table. [02]

ASSOCIATION: none

SUBMITTED: 18Dec64 ENCL: 00 SUB CODE: NP, OP

NO REF SOV: 008 OTHER: 002 ATD PRESS: 4076

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

L 2720-66 EWT(1)/EWT(m)/EPA(s)-2/EPF(c)/EPA(w)-2/EWP(t)/EWP(b)/EWA(m)-2
ACCESSION NR: AP5017191 IJP(c) JD UR/0139/65/000/003/0168/0169
44,55 44,55

AUTHOR: Chernenko, L. A.; Murav'yev, I. I.; Prilezhayeva, N. A. 44,55

TITLE: Investigation of glow discharge in an Ne + He mixture

SOURCE: IVUZ. Fizika, no. 3, 1965, 168-169 21,44,55

TOPIC TAGS: neon, helium, gas discharge spectroscopy, glow discharge, line intensity, electron temperature

ABSTRACT: The authors investigated the variation of the concentration, electron temperature, and the ratio of the longitudinal electric field to the pressure (E/p), as functions of the partial pressures of the neon and helium in the mixture, using a two-probe method. The variation in the intensity of the individual neon lines and the variation of the population of the 2^1S_0 metastable level of helium were also measured. The results are tabulated. They show that the electron temperature increases with increasing helium content, so that the changes in the neon-line intensities are due not only to impacts of the second kind, but also to a change in the excitation condition. The added ionization to the presence of a second gas increases with decreasing E/p ratio. The observed decrease of the metastable level population with increasing helium content is due to a decrease in the electron temperature and to the action of impacts of the second kind. The data will be used

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L 2720-66

ACCESSION NR: AP5017191

in a future article to estimate the absolute cross sections of impacts of the second kind in the Ne-He mixture. Orig. art. has: 3 tables.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut imeni V. D. Kuznetsova (Siberian Physicotechnical Institute)

SUBMITTED: 22Apr64 ENCL: 00 SUB CODE: ME, EM

NR REF SOV: 006 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

KOKHANENKO, V.V.; PRIDYBAYEVA, N.A.

Emission spectrum of nitrogen in a glow discharge under elevated pressure. Izv. vys. ucheb. zav.; fiz. 8 no.1:152-154 '65. (MIRA 18:3)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybyshева.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

ZAV'YALOVA, A.Yu.; ZAV'YALOV, G.I.; PRILEZHAYEVA, N.A.

Broadening of the mercury λ2537 Å resonance line in the presence of some complex molecules. Izv. vys. ucheb. zav.; fiz. no.5:3-7 '64. (MIRA 17:11)

1. Krasnodarskiy pedagogicheskiy institut imeni 15-letiya Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

L 39403-65 EPF(c)/EPR/EPA(s)-2/EPA(w)-2/EWT(1)/EWT(m)/EEC(t)/EWP(b)/EWA(m)-2/EWP(t)
Pr-4/Ps-4/Pa-1 [illegible]

ACCESSION NR: AP5006063 S/0139/65/000/001/0152/0154

AUTHOR: Kokhanenko, V. V.; Prilezhayeva, N. A.

TITLE: Investigation of the radiation of nitrogen in a high-pressure glow discharge

SOURCE: IVUZ. Fizika, no. 1, 1965, 152-154

TOPIC TAGS: glow discharge, nitrogen spectrum, nitrogen molecular band, nitrogen band system, stepwise excitation

ABSTRACT: The relative line intensities of the N_2 spectrum emitted in the glow-discharge band were measured. The discharge was excited in a quartz tube 8 mm in diameter at a voltage of 10 kV from a full-wave rectifier, and development of an arc discharge was prevented by cooling the cathode with water. The radiation from the discharge was photographed both along and transverse to the axis. The intensities in the bands of the first and second positive nitrogen systems were investigated at constant current and variable pressure (10—100 mm Hg) and at constant pressure and varying the current. The measurements showed that the intensities of all the investigated bands decrease with increasing gas pressure in the discharge. The intensity of the bands of the first positive system increases more rapidly than

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L 39403-65
ACCESSION NR: AP5006065

that of the second system. The pressure dependence was the same in the transverse direction as in the longitudinal direction. No noticeable reabsorption was observed. The attenuation of the first positive system with increasing pressure can be attributed to the predominant quanching of the state $B^3\Pi$ by the gas molecules. An increase in the current does not give rise to a faster growth of intensity of the bands from the $C^3\Pi$ level than from the $B^3\Pi$ level, and does not lead to any conclusive deductions concerning the presence of stepwise excitation through the $B^3\Pi$ level. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuybysheva (Siberian Physicotechnical Institute, Tomsk State University

SUBMITTED: 15Jul63 ENCL: 00 SUB CODE: OP, EM

NR REF SOV: 000 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRIZEZHAYEVA, N.A.
Sherstkov, Yu.A.

105

PHASE I BOOK EXPLOITATION SOV/6181

Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy (Materials of the Third Ural Conference on Spectroscopy) Sverdlovsk, Metallurgizdat, 1962. 197 p. Errata slip inserted. 3000 copies printed.

Sponsoring Agencies: Institut fiziki metallov Akademii nauk SSSR. Komissiya po spektroskopii; and Ural'skiy dom tekhniki VSNTO.

Eds. (Title page): G. P. Skornyakov, A. B. Shayevich, and S. G. Bogomolov; Ed.: Gennadiy Pavlovich Skornyakov; Ed. of Publishing House: M. L. Kryzhova; Tech. Ed.: N. T. Mal'kova.

PURPOSE: The book, a collection of articles, is intended for staff members of spectral analysis laboratories in industry and scientific research organizations, as well as for students of related disciplines and for technologists utilizing analytical results.

COVERAGE: The collection presents theoretical and practical problems of the application of atomic and molecular spectral analysis in controlling the chemical composition of various materials in ferrous and nonferrous metallurgy, geology, chemical industry, and medicine. The authors express their thanks to G. V. Chentsova for help in preparing the materials for the press. References follow the individual articles.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

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6

Preobrazhenskiy, N. G. New version of the reabsorption method for measuring absolute atom concentrations in plasma 8

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

S/194/62/000/006/179/232
D201/D308

AUTHORS: Prilezhayeva, N.A., and Kokhanenko, V.V.

TITLE: Obtaining a thermodynamic equilibrium in a discharge

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, 52, abstract 6Zh342 (V sb. Nekotovyye vopr. emission. i molekulyarn. spektroskopii, Krasnoyarsk, 1960, 3-8)

TEXT: Since recent reports in literature state that there is no thermodynamic equilibrium in arc and spark discharges realized at atmospheric pressure (e.g. in arcs in molecular and inert gases) it becomes necessary to analyze the conditions at which this equilibrium can be obtained and to compare them with experimental data. At present it is impossible to calculate the corresponding conditions, since too many unknown constants are involved. However, an experimental analysis based on the equality of temperatures characterizing the energy storage over all degrees of freedom of the particles, appears to be possible. For molecular gases in particular it must be $T_{el} = T_{col} = T_{rot}$. The measurements of the above tempera-

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tures, carried out for an arc discharge in air and for the glow discharge in nitrogen, have shown that the above temperatures are either equal or close to each other in both cases, when pressure increases (for the glow discharge $T_{el} = T_{rot}$ for the arc discharge starting with 200 mm Hg, and $T_{col} = T_{rot}$ for the glow discharge starting with 90 mm Hg). This shows that the condition of thermodynamic equilibrium is approached. It follows from these investigations that the practical application of spectral analysis of discharge in molecular and inert gases requires preliminary checking of thermodynamic equilibrium. The upsetting of this equilibrium may, in some individual cases, cause an anomalous distribution of the relative intensity of the lines of the homogeneous pair leading ultimately to considerable errors in the quantitative spectroscopic analysis. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

S/058/62/000/006/125/136
A062/A101

AUTHORS: Prilezhayeva, N. A., Kokhanenko, V. V.

TITLE: Establishing a thermodynamic equilibrium in discharges

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 52, abstract 6Zh342 (V sb. "Nekotoryye vopr. emission. i molekulyarn. spektroskopii". Krasnoyarsk, 1960, 3 - 8).

TEXT: As it was reported recently in the literature that sometimes thermodynamic equilibrium does not occur in arc and spark discharges burning under atmospheric pressure (for example in arcs burning in molecular and inert gases), the necessity arises to analyze the conditions of establishing a thermodynamic equilibrium and to compare these conditions with the available experimental data. Calculation of the corresponding conditions is at the present time impossible, because it requires the knowledge of a great number of unknown constants. However, quite realistic is the experimental investigation based on the equality of the temperatures which characterize the energy quantities at all degrees of freedom of the particles. In particular, for molecular gases, there should be

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

S/058/62/000/006/125/136
A062/A101

Establishing a thermodynamic equilibrium in discharges

$T_{el} = T_{vib} = T_{rot}$. Measurements of those temperatures, carried out for an arc discharge in air and for a glow discharge in nitrogen have shown that, in both cases, as the pressure is increased (for the arc discharge starting from 200 mm Hg, for the glow discharge from 90 mm Hg) the said temperatures become equal or approximately equal ($T_{el} = T_{rot}$ for the arc discharge and $T_{vib} = T_{rot}$ for the glow discharge). This shows that the thermodynamic equilibrium is approached. It results from the given investigations that applying in practice the spectral analysis of discharges, burning in molecular and inert gases, requires a preliminary verification of the establishment of a thermodynamic equilibrium, because the violation of the latter can in particular cases cause an abnormal behaviour as regards the intensity of the lines which compose a homologous pair, and a considerable error in the quantitative spectral analysis.

I. Afanas'yev

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEV, S.S., prof., doktor fiziko-matem.nauk

Teaching a course in physics. Trudy LSGMI 36:167-174 '56.
(MIRA 14:1)

1. Zaveduyushchiy kafedroy fiziki Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.
(PHYSICS--STUDY AND TEACHING)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, T.S.

AMS/A+B

I

JAN 1951

7.1-113

551.54:551.586.012

Zhikharev, S. S. and Prilezhayeva, T. S. O nekotorykh izmeneniiakh krovi v usloviiakh vysokogornogo klimata. [Blood changes in a mountain climate.] (In Trudy El'bruskoi Ekspeditsii Akademii Nauk, SSSR, i Vsesoiuznogo Instituta Eksperimental'noi Meditsiny 1934 i 1935. [Reports of the Elbrus Expedition 1934 and 1935.] Moscow, 1936. p. 447-461. 7 figs., 3 tables, 19 refs. English summary p. 460-461 [In Nauk, SSSR, Komissiia po izucheniiu stratosfery, Tom II.]) DLC—The erythrocyte count increases by 1 to 1.5 million per cubic millimeter at an elevation of 1300 m., but at higher elevations it increases more slowly. The erythrocyte count remained high for 1½ to 2 months after return to sea level. Immature erythrocytes increased in number with increase in altitude. The sedimentation rate of erythrocytes is at first accelerated at high altitudes; it gradually returns to normal and finally it is slowed down. *Subject Headings:* Physiological climatology, Atmospheric pressure, Elbrus Expedition.—*I.L.D.*

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, V.M.; KARAVAYEVA, V.M.; PRILEZHAYEVA, Ye.N.; SHOSTAKOVSKIY, M.F.

Synthesis of sulfur compounds based on vinyl ethers and acetylene. Report No.15: Free-radical copolymerization of thiovinyl ethers with some unsaturated compounds. Izv. AN SSSR. Otd. khim. nauk no.5:650-651 My '57. (MIRA 10:8)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR.

(Polymerization) (Vinyl ether)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

SHOSTAKOVSKIY, M.F.; PRILEZHAYEVA, Ye.F.; AZOVSKAYA, V.A.; YANSONS, I.; YANSONS, S.

Diene syntheses with bivinyl sulfur-containing dienophiles. Zhur. ob. khim. 31 no.6:2079-2080 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii AN SSSR.
(Dienophiles) (Butadiene)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, YE. N.

PROCESSES AND PROPERTIES INDEX

Autoxidation of halogen derivatives of ethylene. P. Prilezhaeva and N. Prilezhaev. *J. Gen. Chem.* (U. S. S. R.) 9, 1760-73(1939).—The oxidation of polyhaloethylenes by AcO_2H gives the same products as autoxidation and probably proceeds by the same mechanism. $CHX:CX_2$ (X = Cl or Br) oxidizes to CHX_2CX_2, CHX_2CO_2H, CO and CO_2. $CX_2:CX_2$ gives C_2X_4, CX_3CO_2H and CO_2. Oxidation does not occur at the double bond because the C—X bond is weakened in these compds and offers the 1st point of attack. An unstable complex is formed between the polyhalide and the oxidant. This splits to free halogen and a ketene deriv. The latter may be further oxidized to CO or CO_2, or may be halogenated to give the halo acid. Some of the original halide is also halogenated to give the satd. halide.

H. M. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N.

2

The Raman spectra of halogenated ethylenes. Preliminary note. Ye. N. Prilezhaeva, Ya. K. Syrkin and M. V. Vol'kenshtein. *Acta Physicochim. U. R. S. S.* 12, 176-80(1940)(in English).—From exptl. data on the Raman spectra of α,α-dichloro(and dibromo-)-β-phenylethylene, α,α-dichloro-β,β-dimethylethylene, tribromoethylene and tetrabromoethylene dissolved in CaH_6 and CCl_4 solns., as well as from other data in the literature P., S. and V. find that the Raman C=C bond frequencies decrease from $\nu = 1623$ in C_2H_4 to 1608 (1598) in monochloro(bromo)-, to 1586 and 1576 (1584 and 1578) in *cis*- and *trans*-dichloro(bromo)-, to 1585 (1553) in trichloro(bromo)-, and to 1569 (1547) in tetrachloro(bromo)-ethylene. Calcns. using "valence-force" models show that the effect must be due not to the increasing masses of the vibrating atoms or groups but to resonance structures. F. H. Rathmann

THE Moscow State Univ.
Karpov Inst. Phys. Chem.
Lab. of Raman Effect, Moscow

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N.

The Raman spectra of the halogen derivatives of ethylene and the electronic resonance. E. N. Prilezhaeva, Ya. K. Syrkin and M. V. Vol'kenshtein. *Acta Physicochim. U. R. S. S.* 14, 119-53(1941)(in English); cf. C. A. 34, 5759. Complete Raman spectra are given for tetrabromo-, tribromo-, 1,1-dichloro-2,2-dimethyl-, 1,1-dichloro-2-phenyl-, and 1,1-dibromo-2-phenyl ethylenes. In each case the frequency is lower than the corresponding frequency of ethylene. These data together with others from the literature, collected in 16 tables, show that the order of increasing effect on the Raman frequency is alkyl < COOH, $COOC_2H_5$ < OC_2H_5, C_6H_5 < COH < Cl < COCl < CN < C CH. E. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

Raman spectra of vinyl alkyl ethers. M. I. Batuev, B. N. Prieshaeva, and M. F. Shostakovskii (Acad. Sci. U.S.S.R., Moscow). *Bull. acad. sci. U.R.S.S., Classe sci. chim.* 1947, 123-30(in Russian).—The Raman frequencies in cm.$^{-1}$ (with intensities on a 10 scale) are given in the following: MeOCH:CH$_2$ (I), 220(3d), 230(3d), 243(3d), 290(0), 306(0), 319(5), 332(5), 506(0), 518(2d), 525(2d), 534(2d), 579(1d), 599(1d), 806(3), 816(3), 830(3), 861(0), 872(1), 879(7), 892(7), 976(0), 985(0), 1000(4), 1017(2), 1043(0), 1052(3d), 1073(3d), 1088(3d), 1150(2), 1305(0), 1323(10), 1347(2), 1446(3d), 1459(3d), 1473(3d), 1612(6), 1639(3), 1653(3), 2874(1), 2901(1), 2939(1), 2937(2), 2953(1), 3008(2), 3024(2), 3080(0), 3098(2d); EtOCH:CH$_2$ (II), 245(5), 290(0), 400(5d), 419(0), 470(0), 509(4), 524(2), 595(3), 807(3d), 822(3d), 846(6), 944(2d), 967(2d), 1022(0), 1040(2d), 1096(0), 1116(5), 1304(5), 1320(10), 1355(0), 1412(1d), 1448(3d), 1460(2d), 1612(7), 1637(6), 1654(5), 2880(6), 2936(9), 2983(4), 3024(3), 3080(0); PrOCH:CH$_2$ (III), 234(3d), 258(3d), 256(3d), 313(1), 334(2d), 355(2d), 409(4), 470(2d), 509(2d), 509(3d), 643(6d), 760(1), 807(4d), 829(4d), 849(0d), 881(5), 904(3d), 967(2d), 985(2d), 1000(2d), 1025(3d), 1047(3d), 1110(2d), 1131(2d), 1149(2d), 1310(5), 1322(10), 1352(0), 1412(0), 1439(4d), 1453(4d), 1468(4d), 1612(6), 1641(5), 1651(3), 2878(10), 2913(3), 2940(10), 2975(3), 3024(3), 3080(0); iso-PrOCH:CH$_2$ (IV), 251(2d), 265(0), 310(0), 349(3d), 367(0), 411(3d), 485(3d), 508(5), 598(2d), 803(7), 818(7), 898(4), 929(1d), 941(2d), 973(1), 994(1), 1022(0), 1112(4d), 1127(3d), 1142(2d), 1180(2d), 1310(10), 1322(10), 1350(4), 1412(0), 1441(1), 1455(4), 1479(0), 1612(3), 1638(10), 1651(10), 2882(4), 2923(9), 2945(9), 2983(10), 3024(3), 3080(0); BuOCH:CH$_2$ (V), 222(3), 238(3), 265(0), 332(2d), 343(2d), 358(2d), 380(2d), 430(1d), 457(1d), 494(2d), 504(2d), 532(0d), 598(2d), 609(2d), 637(0), 808(4d), 825(4d), 839(5d), 912(3d), 940(3d), 959(3d), 980(3d), 1016(3d), 1027(3d), 1039(3d), 1096(3d), 1085(3d), 1108(2d), 1129(2d), 1149(2d), 1185(0), 1307(3), 1321(10), 1414(0), 1435(4d), 1455(4d), 1468(4d), 1611(7), 1638(5), 1653(4), 2871(10), 2913(9), 2940(9), 2967(6), 3022(3), 3080(0); iso-BuOCH:CH$_2$ (VI), 234(0), 299(0), 293(5), 399(0), 442(1), 455(5), 496(0), 557(0), 601(2d), 807(5), 823(5), 835(8), 941(3d), 968(4d), 1017(3), 1039(0), 1069(0), 1120(4d), 1131(4d), 1143(4d), 1181(3d), 1308(10), 1321(10), 1345(1), 1419(0), 1440(5d), 1455(5d), 1468(5d), 1612(6), 1643(5), 1655(3), 2875(10), 2912(7), 2943(3), 2970(10), 3023(2), 3081(0); iso-AmOCH:CH$_2$ (VII), 223(0), 243(3d), 267(1), 300(1d), 333(1d), 352(1d), 372(1d), 392(1d), 414(1d), 437(1d), 457(0), 477(0), 503(1d), 543(1d), 558(0d), 610(2d), 641(0), 705(2d), 734(0), 772(4), 814(6d), 828(3d), 894(0), 913(3), 923(3), 951(4), 962(4), 987(1d), 1010(0), 1040(0), 1057(0), 1135(4), 1152(0), 1169(2), 1307(4), 1321(10), 1336(0), 1443(4), 1451(4), 1468(4), 1610(5), 1641(4d), 1653(4d), 2873(10), 2912(5), 2943(5), 2975(10), 3018(1), 3081(0); Me(CH$_2$)$_2$CMeHOCH:CH$_2$ (VIII), 254(1d), 343(0d), 379(0d), 404(0d), 437(0), 498(1d), 514(0), 554(0), 629(0), 700(0), 760(0), 814(5d), 830(5d), 848(5d), 888(3d), 907(4d), 982(4d), 1071(4d), 1085(4d), 1116(4d), 1125(4d), 1140(1d), 1162(0), 1310(10), 1325(5), 1438(8), 1449(8), 1462(6), 1613(2), 1640(7), 1651(1), 2902(10), 2885(10), 2914(10), 2939(10), 2981(0), 3025(1), 3082(0). The frequencies corresponding to valence vibrations C—H, both in the

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vinyl (3023) 3080) and in the alkyl group (2880-2980), and the C—H δ-vibrations (1300-1470) are fairly const.; the C—H γ-vibrations are reflected in the region 808-840 and around 97*. The frequencies of the alkyl C—C vibrations, above 900, and of the C—O vibrations, above 1000, vary considerably from one ether to another; likewise, there are marked differences in the frequencies of the deformation vibrations C—C and C—O, in the region 300-800. Common to all 8 ethers is the triplet 1612, 1640, 1651 corresponding to the double bond; by assuming the latter two lines to be the result of a Fermi-resonance splitting of the line 1645 through its interaction with the overtone 820, the doublet 1612, 1645 can be attributed to a rotation isomerism due to restricted rotation around the C—O bond, with the energy barrier somewhat enhanced owing to interaction of the paired electrons of O with the double bond, resulting in some superposition of the structure $H_2\hat{C}.CH.\hat{O}R$. The differences in the ratios of the intensities of the triplet lines in ethers of primary and secondary alkyls may be due to different wts. of the isomers. While the Fermi resonance effect is marked for the isomer corresponding to the 1645 frequency, absence of a similar splitting of the 1612 line may be due to insufficient dispersion of the app.; this line appears unmistakably as a doublet in II, III, and VI.

N. Thon

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAEYA, E. N.

Azeotropic mixtures of vinyl alkyl ethers with alcohols. M. F. Shostakovskii and E. N. Prilezhaeva. *J. Gen. Chem.* (U.S.S.R.) 17, 1129-39(1947)(in Russian).—Vinyl alkyl ethers form azeotropic mixts. with alcs. when the difference between the b.ps. of the pure components does not exceed 24-25°. Vinyl ethyl (I), vinyl butyl (II), vinyl isobutyl (III), and vinyl isoamyl (IV) ethers were prepd. and purified, and studies were made on various mixts. of them with water (V), ethyl alc. (VI), butyl alc. (VII), isobutyl alc. (VIII), and isoamyl alc. (IX). A method was devised for analyzing for the vinyl alkyl ethers in the presence of alcs., in which the ether is hydrolyzed to ethanal oxime by a strongly acid soln. of hydroxylamine-HCl, the oxime then being titrated with standard base. The following results were obtained for b.ps. of the pure components, b.p. of the azeotrope, and mole % of ether in the azeotrope: II-VII: 93.8°, 117.7°, 93.3°, 89.9%; II-V: 93.8°, 100°, 70.7°, 58.0%; III-VIII: 83.9°, 108.6°, 82.7°, 91.8%; IV-IX: 112.5°-132.7°, 131.1°, 112.1°, 85%. No azeotropes are formed in the systems I-VI, II-V, and II-VII. Arthur J. Miller

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[illegible], [illegible].

Osipenko, F. G. and Prilezhayeva, [illegible]. "The [illegible] capacity of [illegible] $Al(OH)_3$ and aluminum soaps precipitated on [illegible]", [illegible] (Belorus. gos. un-t), Issue 9, [illegible], [illegible].

So: U-[illegible], 1[illegible] April [illegible], (Letopis 'Zhurnal'nykh Statey, No. [illegible], [illegible]).

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, YE. N.

PA 30/49T10

USSR/Chemistry - Vinyl Alkyl Esters Sep 48
Chemistry - Hydrolysis, of Vinyl Alkyl Esters

"Hydrolysis of Vinyl Alkyl Esters in Aqueous Dioxane Solutions," Ye. N. Prilezhayeva, E. S. Shapiro, M. F. Shostakovskiy, Inst Org Chem, Acad Sci USSR, 11 pp

"Zhur Obshch Khimii" Vol XVIII, No 9

Tabulated data shows that rate of hydrolysis of vinyl butyl and vinyl ethyl esters and of dibutylacetal by hydrochloric acid decreases with increased content of dioxane in water used as solvent. Discusses mechanism of this reaction. Submitted 21 Jun 47.

30/49T10

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N., KURSANOV, D.N., KABACHNIK, M.I., KAVERZNEVA, Ye.D., SOKOLOV, N.D. and FREYDLINA, R. Kh.

"The Current State of Chemical Structure," Usp. Khim., 19, No.5, pp 529-544, 1950

Translation W-16104, 30 Dec 50

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

15

BTR

8922* Some Methods for Quantitative Determination of Simple Vinyl Esters. (In Russian.) M. F. Shostakovskii, E. N. Prilezhaeva, and N. I. Uvarova. *Zhurnal Analiticheskoi Khimii*, Nov-Dec 1951, p. 348-352.

Three methods were evaluated: hydrolytic oxine formation in presence of hydroxylamine chloride or hydroxylamine sulfate and an iodometric method. Gives details and typical data in tables.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, YE. N.

183T11

USSR/Chemistry - Organic Sulfur Compounds May/Jun 51

"Synthesis of Sulfur Compounds From Acetylene and Vinyl Ethers. Communication No 1: Synthesis of alpha-Alkoxyethylmercaptanes and alpha, alpha'-Dialkoxydiethylsulfides by Reacting Hydrogen Sulfide with Vinyl Ethers," M. F. Shostakovskiy, Ye. N. Prilezhayeva, E. S. Shapiro, Inst Org Chem, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk," No 3, pp 284-2[illegible]

Found conditions of quant addn of hydrogen sulfide according to Markovnikov's rule to vinylether

L[illegible] 183T11

USSR/Chemistry - Organic Sulfur Compounds (Contd) May/Jun 51

ether and vinylbutyl ether with formation of alpha-alkoxyethanethiols and alpha, alpha'-dialkoxydiethylsulfides. Showed hemithioacetals, as distinguished from their oxygen analogues, are capable of brief existence as free substances. Studied some reactions of alpha-alkoxyethanethiols and alpha, alpha'-dialkoxydiethylsulfides and proved constitution of these substances. In syst RC-C-C-X, there is conjugation of single bonds leading to facilitated splitting off of OR as anion and X as cation with simultaneous formation of double C=S bond.

L[illegible] 183T11

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

CA

1P

Synthesis of sulfur compounds based on vinyl ethers and acetylene. II. Synthesis of 2,2'- and 1,2'-dialkoxydiethyl sulfides. E. N. Prilezhaeva, F. S. Shapiro, and M. F. Shostakovskii. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* **1951**, 438-47; cf. *C.A.* **46**, 883f.—H_2S, passed through $BuOCH:CH_2$ (30 g.) with addn. of 0.2 ml. 26.4% HCl in dioxane and continued application of H_2S pressure (unstated but somewhat above atm.) for 10 hrs., reacted vigorously after 3 hrs., and a total of 4.8 g. added to the $BuOCH:CH_2$. Distn. gave a little $(BuO)_2CHMe$, 1.6 g. *1,1-bis(2-butoxyethylmercapto)ethane*, $b_{3.5}$ 166.5-9.0°, n_D^{20} 1.4814, d_4^{20} 0.9702, and some 27 g. mixed $(BuOCH_2CH_2)_2S$ (I) and $BuOCH_2CH_2SCH(OBu)Me$, (II), $b_{1.7}$ 117-40°; careful fractionation gave numerous fractions of disproportionation products of the latter acetal, including $CH_2:CHSCH_2CH_2OBu$, $b_{1.5}$ 64.5-5.0°, n_D^{20} 1.4690, d_4^{20} 0.9190; $(BuOCH_2CH_2S)_2CHMe$, $b_{1.7}$ 150-4°; I, b_4 124-4.5°, b_2 112-13°, b_{760} 283-6°, n_D^{20} 1.4559, d_4^{20} 0.9223 (best isolated after heating the crude product 9 hrs. at 150°); and II, b_4 107.5-8.5°, $b_{1.7}$ 117.1°, d_4^{20} 0.9171, n_D^{20} 1.4537. $BuOCH:CH_2$ (30 g.) with H_2S, as above, but with 0.2 ml. 25.2% HCl in dioxane in the presence of 0.02 g. piperidine gave 15% $BuOCH_2CH_2SH$, b_{760} 165-7°, $b_{1.5}$ 68-9°, n_D^{20} 1.4488, d_4^{20} 0.9111 (yielding with $HgCl_2$, $C_5H_5OSHgCl$, m. 137.5-8.0°), and 69% mixed I and II. Generally, increased concn. of HCl gave more products of Markovnikov-type addn. Similarly H_2S with $EtOCH:CH_2$ in dioxane-HCl gave 55.9% *Et analogs* of I and II, and fractionation of the reaction mixt. gave a little $EtOCH_2CH_2SH$; *Et analog* of I, $b_{1.5}$ 83.3-4.4°, n_D^{20} 1.4560, d_4^{20} 0.9550; and *Et analog* of II, $b_{1.5}$ 70.8-1.4°, n_D^{20} 1.4512, d_4^{20} 0.9474, among the products from the reaction in 23.7% HCl-dioxane soln. was obtained some *1,1-bis(2-ethoxyethylmercapto)ethane*, $b_{1.5}$ 131-4°, n_D^{20} 1.4880, d_4^{20} 1.0120, a fraction contg. crude $(MeCH:OEt)_2S$, $b_{1.7}$ 57.5-8.5°, n_D^{20} 1.4474, was also isolated. Analysis of the mixt. is possible because of the decompn. of compds. of the last type and those analogous to II, in the presence of $HgCl_2$, yielding ppts. of RSHgCl. G. M. K.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N.

USSR/Chemistry - Organic Sulfur Compounds Sep/Oct 51

"Synthesis of Sulfur Compounds on the Base of Vinyl Ethers and Acetylene. Communication 3. Certain Properties of α,β and β,β'-Dialkoxydiethylsulfides," Ye. N. Prilezhayeva, E. S. Shapiro, M. F. Shostakovskiy, Inst of Org Chem, Acad Sci USSR

PA 195T14

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 5, pp 560-567

Studied some characteristic reactions of α,β- and β,β'-dialkoxydiethylsulfides. Comparison of chem reactions of α,α'-, α,β-, and β,β'-dialkoxydiethylsulfides showed that introduction of alkoxyl

195T14

USSR/Chemistry - Organic Sulfur Compounds (Contd) Sep/Oct 51

at C atom which is in α-position with respect to S atom causes compd to react in manner different from that characteristic for dialkylsulfides, which is particularly expressed in decreased ability to form stable complex compds with Hg salts and increased tendency toward characteristic decompn reaction. Discusses causes of this behavior.

195T14

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N.

USSR/Chemistry - Organic Sulfur Compounds - Sep/Oct 51

"Synthesis of Sulfur Compounds on the Basis of Acetylene and Vinyl Ethers. Communication 4. Synthesis of Trithioacetaldehyde," Ye. N. Prilezhayeva, E. S. Shapiro, M. F. Shostakovskiy, Inst of Org Chem, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 5, pp 568-570

By action of H_2S on vinyl ethers in presence of high concns of HCl, prepd with good yield cyclic trimer of thioacetaldehyde and

195T15

USSR/Chemistry - Organic Sulfur Compounds (Contd) - Sep/Oct 51

corresponding alc. Reaction proceeds through intermediate formation of α-chloroethylalkyl ethers and α-alkoxyethylmercaptans and decompn of latter in acid medium.

195T15

PA 195T15

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

USSR/Chemistry - Vinyl Ethers Nov/Dec 51

"Certain Methods for Quantitative Determination of Vinyl Ethers," M. F. Shostakovskiy, Ye. N. Prilezhayeva, N. I. Uvarov, Inst of Org Chem, Acad Sci USSR

"Zhur Analit Khim" Vol VI, No 6, pp 348-352

On basis of vinylpropyl and vinylisopropyl ethers, worked out methods for quant detn of vinyl ethers. Hydrolytic oximation of ether in presence of hydroxylamine chloride yields good results if ether contains $<$ 20% alc. Greater % of alc results in lengthy procedure and incomplete detn.

195T30

LC

USSR/Chemistry - Vinyl Ethers (Contd) Nov/Dec 51

Hydroxylamine sulfate gives unsatisfactory quant detn since it does not cause total oximation. Iodometric method gives satisfactory results for mixts contg any ratio of ether to alc.

195T30

PRILEZHAYEVA, Ye. N. LC

PA 195T30

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

Ye N. PRILEZHAYEVA, Nov 51

USSR/Chemistry - Oxidation of Olefins

"Life and Works of Nikolay Alexandrovich Prilezhayev," A. A. Akhrem, Ye. N. Prilezhayeva, A. P. Meshcheryakov

"Zhur Obshch Khim" Vol XXI No 11, pp 1925-1931

Presents brief general biography of chemist N. A. Prilezhayev (1872 - 1944) and lists of his scientific works. Devotes considerable discussion to Prilezhayev's work on rules governing oxidation of olefinic double bonds with benzoyl hydroperoxide and synthesis of the compds involved.

PA 194T41

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

3

Synthesis of sulfur compounds based on vinyl ethers. V. Some new representatives of the series α,β- and β,β'-dialkoxydiethyl sulfides. E. N. Prilezhaeva, E. S. Shapiro, and M. F. Shostakovskii. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1952, 459-63(Engl. translation).—See *C.A.* 47, 4840g. H. L. H.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye.N.

Chem
(3)

Chem Abs V48
1-25-54
Organic Chemistry

Vinyl ethyl sulfide. E. N. Prilezhaeva and M. P. Shostakovskii. *Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik* 2, 54-6(1952); cf. *C.A.* 38, 330[6].—An autoclave is charged with 1.5-2 g. powd. KOH and 35 g. EtSH and C_2H_2 is added to 18-20 atm. (for 1 l. app. this represents a 50% excess). Heating with agitation to 120-5°, initially, then to 135-45° 1-1.5 hrs. (max. pressure 30 atm.) gave after diln. with Et_2O and removal of tar some 65% *EtSCH:CH*$_2$, b. 89-92°. Steam distn. of the residue gave some 7.7% $(EtSCH_2)_2$, $b_{4.4}$ 69.5-70°. Redistn. gave pure *EtSCH:CH*$_2$, b. 91.9-2.2°, n^{20}_D 1.4756, d_{20} 0.8756. It forms a salt with $HgCl_2$, m. 32-4°. G. M. Kosolapoff

MF
1-28-54

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye.N.

Chem
(3)

Chem Abs V48
1-25-54
Organic Chemistry

Trimer of thioacetaldehyde (β-form) (β-1,3,5-trimethyl-2,4,6-trithiane). M. F. Shostakovskii, E. N. Prilezhaeva, and E. S. Shapiro. *Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik* 2, 120-8(1952).—BuOCH:CH$_2$ (15 g.) cooled to −10° is satd. over 1 hr. with dry HCl to form MeCHClOBu, and the product is directly treated at −10 to −15° with H$_2$S (thoroughly dry) for 1 hr., after which H$_2$S is passed in at room temp. until no more absorption takes place. The product is washed with H$_2$O on a glass filter, yielding 83-8% *MeCH.S.CHMe.S.CHMe.S*, m. 125-6° (from EtOH). Other alkyl vinyl ethers can be used similarly. G. M. K.

7-28-54

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, YE. N.

Chem Abs V48
25-54
Organic Chemistry

1-Ethoxy-1-acetylmercaptoethane. E. N. Prilezhaeva, M. F. Shostakovskii, and E. S. Shapiro. *Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik* 2, 171-3(1952); cf. *C.A.* 46, 883*f*.—To 8.5 g. MeCH(SH)OEt in 20 g. dry pyridine was added at −5° 9 g. AcCl keeping the temp. under 5°. After stirring 0.5 hr. and allowing the mixt. to stand overnight, it was dild. with Et_2O and H_2O, the aq. layer was extd. with Et_2O, the combined org. layers were washed with H_2O, dried over Na_2SO_4 and distd. yielding 64% *MeCH(OEt)SAc*, b_{17} 60-3.5°. Pure product, b_{18} 62-2.5°, d_{20} 1.004, n_D^{20} 1.4556. Similarly are prepd.: 73% *MeCH(OBu)SAc*, b_7 78-8.5°, n_D^{20} 1.4560, d_{20} 0.9664; 55-6% *MeCH(OEt)SBz*, b_4 120-20.5°, n_D^{20} 1.5472, d_{20} 1.0891; 36-40% *MeCH(OBu)SBz*, b_4 139-40°, n_D^{20} 1.5346, d_{20} 1.0492. G. M. Kosolapoff

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PRILEZHAEVA, E. N.

Chem Abs V48
1-25-54
Organic Chemistry

Chem 4
(4)

1-Ethoxyethyl mercaptan and bis(1-ethoxyethyl) sulfide. M. F. Shostakovskii, E. N. Prilezhaeva, and E. S. Shapiro. Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik 2, 174-8(1952); cf. C.A. 46, 883f.—EtOCH:CH₂ (20 g.) in an ampul is flushed with a stream of dry H₂S, then chilled with liquid N for condensation of 28-8.5 g. H₂S in the ampul. The latter is rapidly sealed and placed into an autoclave for 20-4 hrs. under a pressure of 15-16 atm. of N or H (good quality of ampuls is strongly advised). The ampul is opened after chilling in liquid N and the contents are distd. yielding 47% *MeCH(OEt)SH*, b_{15} 38-9°, and 46.9% *S(CHMeOEt)₂*, b_4 58.2-8.6°. Some MeCH(OEt)₂ is also formed. The proportions of the products are varied by variation of the proportion of the reagents. Similarly can be prepd.: 28-9% *MeCH(OBu)SH*, $b_{20.5}$ 52.2-3.0°, and 65-6% *S(CHMeOBu)₂*, $b_{2.5}$ 96.5-6.7°, from 1 mole BuOCH:CH₂ and 1.3 moles H₂S. Higher proportion of H₂S yields more mercaptan and less sulfide.

G. M. Kosolapoff

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USSR/Chemistry - Organic Sulfur Compounds May/Jun 52

"Synthesis of Sulfur Compounds on the Basis of Simple Vinyl Ethers. Part 5. Some New Representatives of the α,β- and β,β-Dialkoxydiethylsulfides, Ye.N.Prilezhayeva, E.S.Shapiro, M.F.Shostakovskiy, Inst of Org Chem, Acad Sci USSR

"Iz Ak Nauk, Otdel Khim Nauk" No 3, pp 478-483

Addn of H_2S to vinyl isobutyl and vinyl isoamyl ethers in presence of HCl in dioxane forms mixts of α,β- and β,β-dialkoxyethylsulfides. Some chem conversions of new homologues of the dialkoxydiethylsulfide and of the β,β'-dialkoxydiethylmercaptal series were studied.

220T11

PRILEZHAYEVA, Ye. N.

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PRILEZHAYEVA, YE. N.

Synthesis of sulfur compounds on the basis of vinyl ethers and acetylene. VI. Reaction of mercaptans with vinyl ethers. M. F. Shostakovskij, E. N. Prilezhaeva, and E. S. Shapiro. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1953, 325–34(Engl. translation).—See *C.A.* 48, 9311i.

H. L. H.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, YE N

Synthesis of [illegible] compounds on the basis of vinyl ethers and [illegible]. VI. Reaction of mercaptans with vinyl ethers. [illegible] Shostakovskiy, E. N. Prilezhayeva, and R. S. Shamova. [illegible] *Izv. Akad. Nauk SSSR, Otdel. Khim. Nauk* 1953, No. 67, [illegible] 47, [illegible] into 4.9 g. EtSH and 7.2 g. BuOCH:CH$_2$ at [illegible] 90° was hardly passed a current of SO_2, the mixt. stirred 2 [illegible] at room temp., and left overnight [illegible] distill. [illegible] 67 [illegible] 5 [illegible] 4° [illegible] a quant. ppt. of EtSH·CH [illegible] CH in the pr. [illegible] of 100% [illegible]

[illegible] room temp. gave 56.5% [illegible] 0.8868 [illegible] ade. Hg is the product forms [illegible] Oxidation of I with H_2O_2 in AcOH gave [illegible] ($C_8H_{16}O_2S$), b. 112.2-113.5°, n_D^{20} 1.4648 [illegible] gave the [illegible] yield (90.8%) of [illegible] n_D^{20} 1.4520, d_4 0.8879, after 35 hrs. at 60°. With H_2O_2 in AcOH it gave the *sulfoxide*, b. 119-122°, b. 117.2-117.4°, n_D^{20} 1.4661, d_4 0.9055. BuOCH:CH$_2$ and BuOCH:CH$_2$SH under similar reaction conditions, heated 50 hrs. to 60-77 in a period of 7 days gave 91.9% [illegible] with air O_2 and in 6 days give 93.[illegible] the vinyl ether contains some peroxide, the reaction is re-

tarded. Completely peroxide free [illegible] mixt. of reaction [illegible] BuOCH:CH$_2$ and [illegible] Keeping BuOCH:CH$_2$ [illegible] temp. gave [illegible] and [illegible] 84.5% of the latter. Similarly BuOCH:CH$_2$ and [illegible] (OBu)$_2$SH after 7 days gave 60% mixt. [illegible] SCH:CH$_2$OBu and [illegible] 91.1% of the former. A mixt. of 30 g. BuOCH:CH$_2$ [illegible] 9.1 g. AcSH after 2 hrs. gave 90.7% [illegible]

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PRILEZHAYEVA, YE. N.

USSR

Azeotropic mixtures of vinyl alkyl ethers with alcohols. M. F. Shostakovskii, E. N. Prilezhaeva, and N. I. Uvarova. J. Appl. Chem. U.S.S.R. 26, 1003-8(1953) (Engl. translation).—See C.A. 48, 10534d. H. L. H.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

Azeotropic mixtures of vinyl alkyl ethers with alcohols. II. M. F. Shostakovskii, E. N. Trnezhevskii, and N. I. Uvarova (Acad. Sci. U.S.S.R., Moscow). Zhur. Prikl. Khim. 26, 1074-9(1953); cf. C.A. 42, 36334.—Generally CH_2:CHOR and R'OH form a min.-boiling azeotrope if the difference in b.ps. of the components is not over 50°. The closer the b.p., the greater is the difference in properties of the azeotrope from those of the ether; at the same time the proportion of R'OH increases in the azeotrope. The following phys. properties (b.p., d_{20}, n_D^{20}) were found for 4 azeotropes. CH_2:CHOPr-PrOH, 61.9°, 0.7697, 1.3805; CH_2:CHOPr-EtOH, 59.8°, 0.7725, 1.3855; CH_2:CHOCHMe$_2$-iso-PrOH, 55.2°, 0.7557, 1.3842; CH_2:CHOCHMe$_2$-EtOH, 53.6°, 0.7564, 1.3827. The wt.-% compn. of the mixts. (alc.-ether, resp.) were: 4.5-95.5; 17.2-82.8; 5.9-94.1; 10.5-89.5. Viscosities in centipoises at 20° were employed as 1 of the methods of calcg. the compn.; they are for the azeotropes 0.3557, 0.3879, 0.3245, and 0.3350, resp.

G. M. Kosolapoff

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343020014-3

PRILEZHAYEVA, Ye. N.

Synthesis of sulfur compounds from vinyl ethers and acetylene. VII. Peculiarities of the addition reaction of hydrogen sulfide to vinyl butyl ether against the Markovnikov rule. M. F. Shostakovskii, E. N. Prilezhaeva, and E. S. Shapiro (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 292-302; cf. *C.A.* 48, 9311i.—Addn. of H_2S to $BuOCH{:}CH_2$ is catalyzed by small amounts of O, which leads to contra-Markovnikov order of addn.; ascaridole and some peroxides also give this result. Antioxidants hinder the reaction thus proving its radical nature. Larger amounts of O, B_2O_3, and H_2O_2 inhibit the reaction, probably by chain breaking through oxidation of chain-leading radicals $RSCH_2C{\cdot}(OR)H$. Heating 1 mole $BuOCH{:}CH_2$ with 0.4 mole H_2S 80-90 hrs. yields $(BuOCH_2CH_2)_2S$, while an equimolar mixt. in the cold yields $BuOCH_2CH_2SH$. $BuOCH{:}CH_2$ stored for a long time over Na and showing a peroxide test reacts very sluggishly, but $BuOCH{:}CH_2$ stored over K_2CO_3 reacts normally. A good catalytic effect is produced by addn. of small amounts of HCl in dioxane. VIII. General method of synthesis of β-alkoxymethylmercaptans. *Ibid.* 303-13.—Reaction of H_2S and $ROCH{:}CH_2$ in the presence of traces of O yields the corresponding alkoxyethylmercaptans and corresponding sulfides, predominantly on contra-Markovnikov structure, especially noted in n-derivs. Branched ethers tend to give the normal addn. products. Keeping 15 g. $EtOCH{:}CH_2$ and 9.7 g. H_2S in sealed tube 10 days gave 58.5% $EtOCH_2CH_2SH$, b. 120-8°, n_D^{20} 1.4456, d_{20} 0.9112, and 5.1 g. $(EtOCH_2CH_2)_2S$; the former yields $RSHgCl$, m. 154.5-5°. $PrOCH{:}CH_2$ with H_2S at 70° yielded 60.8% $PrOCH_2CH_2SH$, b. [illegible] n_D^{20} 1.4478, d_{20} 0.9227, and a *mixture* of $(PrOCH_2CH_2)_2S$ and $PrOCH_2CH_2SCH(OPr)Me$, b_{14} 139-43°, [illegible] of the latter obtained by titration; pptn. of th[illegible] with $HgCl_2$ gave the pure *former sulfide*, b. 16[illegible] [illegible]4523, d_{20} 0.9391, whose *$HgCl_2$ adduct* m. 69-70°. Reaction of

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iso-PrOCH:CH_2 with H_2S at 70° gave 70% *iso-PrOCH₂CH₂SH* (at room temp. the yield was 58%), b_{10} 56.1-6.4°, n_D^{20} 1.4421, d_{20} 0.9136, and 39-89% (depending on reagent ratio) mixed (*iso-PrOCH₂CH₂)₂S* and *iso-PrOCH₂CH₂-S-CH₂CH₂OCHMe₂*, containing appreciable amounts of the latter; the mixture yielded after the above treatment pure (*iso-PrOCH₂CH₂)₂S*, b_4 99-9.5°, n_D^{20} 1.4493, d_{20} 0.9258. Reaction with iso-BuOCH:CH_2 at room temp. gave somewhat lower total yield than at 70°; the products were: *iso-BuOCH₂CH₂SH*, b_4 45.2-5.5°, n_D^{20} 1.4444, d_{20} 0.9038, originally contaminated by some iso-BuOCHMeSH, and a mixture of sulfides (probably all possible isomers) from which was isolated (*iso-BuOCH₂CH₂)₂S*, b_4 125-6°, n_D^{15} 1.4506, d_{20} 0.9130; *$HgCl_2$ salt*, m. 47°. iso-AmOCH:CH_2 reacted slowly at room temp. but at 70° gave up to 88% total yields of mercaptans and sulfides as isomeric mixtures; from these were isolated pure: *iso-AmOCH₂CH₂SH*, b_6 53.9-4.5°, n_D^{20} 1.4489, d_{20} 0.9028, and (*iso-AmOCH₂CH₂)₂S*, b_4 144-5°, n_D^{20} 1.4550, d_{20} 0.9039. $C_6H_{10}OCH:CH_2$ reacts slowly with H_2S yielding up to 90% total products from which were isolated: *$C_6H_{10}OCH_2CH_2SH$*, $b_{0.4}$ 103°, n_D^{20} 1.4556, d_{20} 0.9995, and (*$C_6H_{10}OCH_2CH_2)_2S$*, $b_{0.4}$ 195-8°, n_D^{20} 1.4610, d_{20} 0.9952. Vinyl cyclohexyl ether reacts very slowly and tends to yield appreciable amounts of Markovnikov orientation; the total products formed at 60° can rise to 72%, at room temp. the total yield can reach 88%; the isolated products were: *$C_6H_{10}OCH_2CH_2SH$*, $b_{0.4}$ 73-3.5°, n_D^{20} 1.4864, d_{20} 0.9938, and (*$C_6H_{10}OCH_2CH_2)_2S$*, b_4 182-4°, n_D^{20} 1.4982, d_{20} 1.0112, whose 0.5 *$HgCl_2$ salt* m. 118°. *EtOCH₂CH₂SHgCl*, m. 154.5-5.5°; *PrOCH₂CH₂SHgCl*, m. 137-7.5°; *iso-PrOCH₂CH₂SHgCl*, m. 153.5°; *BuOCH₂CH₂SHgCl*, m. 137.5-8°; *iso-BuOCH₂CH₂SHgCl*, m. 144-4.5°; *iso-AmOCH₂CH₂SHgCl*, m. 126°; *$C_6H_{10}OCH_2CH_2SHgCl$*, m. 126°, *$C_6H_{10}OCH_2CH_2SHgCl$*, m. 150.5°.

G. M. Kosolapoff

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PRILEZHAYEVA YE.N

SHOSTAKOVSKIY, M.F.; PRILEZHAYEVA, Ye.N.; SHAPIRO, E.S.

Synthesis of sulfurous substances based on vinyl esters and acetylene. Report no.8. General method for the synthesis of β-alkoxyethylmercaptans. Izv. AN SSSR. Otd.khim.nauk no.2:303-313 Mr-Ap '54. (MLRA 7:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.
(Mercaptans)

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PRILEZHAYEVA, Ye.N.

USSR/Chemistry Quantitative analysis

Card : 1/1

Authors : Shostakovskiy, M. F., and Prilezhaeva, E. N.

Title : Synthesis of sulfurous compounds on acetylene and vinyl ether bases. Part 9.- Synthesis and certain properties of beta-alkoxyethylvinyl sulfides

Periodical : Izv. AN SSSR, Otd. Khim. Nauk. 3, 517 - 525, May - June 1954

Abstract : A method for the synthesis of beta-alkoxyethylvinyl sulfides from beta-alkoxy methyl mercaptanes is described. A newly introduced method for quantitative determination of thiovinyl ethers, based on their decomposition reaction in the presence of mercuric chloride, is analyzed. A study of the chemical properties of beta-alkoxyethylvinyl sulfides showed that the reactions of thiovinyl ethers are much different than the reaction of their oxygen analogues. Sixteen references: 11 USSR, 4 USA and 1 German. Tables.

Institution : Acad. of Sc. USSR, The N. D. Zelinskiy Institute of Org. Chemistry

Submitted : Feb 10, 1953

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PRILEZHAYEVA, Ye.N.

USSR/ Chemistry Sulfurous compounds

Card : 1/1

Authors : Shostakovskiy, M. F., Prilezhaeva, E. N., and Uvarova, N. I.

Title : Synthesis of sulfurous compounds on the vinyl ether and acetylene basis. Part 10.- Synthesis and certain conversions of vinylethyl sulfide.

Periodical : Izv. AN SSSR, Otd. Khim. Nauk. 3, 526 - 534, May - June 1954

Abstract : Conditions favorable for the synthesis of vinylethyl sulfide with a yield of 60%, were established. The addition of mercaptan and hydrogen sulfide to vinylethyl sulfide when exposed to air, and the polymerization of the latter in the presence of $FeCl_3$ and $SnCl_2$ ion catalysts, are analyzed. The formation of mercurated ethylmercaptan salt was determined during the reaction of vinylethyl sulfide with mercuric chloride in alcohol and water solutions. The formation of an unstable complex salt, decomposing in water or alcohol, was established during the reaction in an ether solution. Twenty-two references: 10 USSR, 8 German, 4 USA. Tables.

Institution : Acad. of Sc. USSR, The N. D. Zelinskiy Institute of Org. Chemistry

Submitted : February 10, 1953

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PRILEZHAYEVA, Ye. N.

USSR.

Synthesis and transformations of vinyl ethers of higher polyatomic alcohols and cellulose. Tetravinyl ether of Me α-glucoside. M. F. Shostakovskii, E. N. Prilezhaeva, and L. V. Tsymbal (N.D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 96, 99-102(1954).—Almost no vinylation of Me α-glucoside takes place in the reaction with C_2H_2 below 125°; above 150° colored products form; from several such runs there was obtained a small amount of a blue substance, b_1 133-5°, n_D^{20} 1.4920, d_{20} 1.1007, which appeared to be $C_{10}H_{12}O_4$, C_4H_2. Probably the best vinylation technique was as follows: 60 g. *Me α-glucoside*, 12 g. KOH and 350 ml. dioxane was satd. with C_2H_2 in an autoclave at room temp. then heated 11 hrs. to 125-45° with 133 g. C_2H_2 being added to the app. Distn. of the product gave 84.8% *tetravinyl ether of methyl glucoside*, b_1 138-40°; after redistn. from Na the product b_1 138-8.5°, m. 43-5°, $[\alpha]_D^{20}$ 146.3° (CCl_4), n_D^{20} 1.4820, d_{20} 1.1020, it supercools easily. Shaking the product with 3.5% HCl gave AcH and methyl glucoside in 24 hrs. at room temp.

G. M. Kosolapoff

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TRILEZHAYEVA, Ye.N.

Synthesis of sulfur compounds from vinyl ethers and acetylene XII. Most effective [illegible] addition [illegible] hydrogen [illegible]

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PRILEZHAYEVA, Ye N.

Synthesis of sulfur compounds based on vinyl ethers and acetylene. XIII. General method of synthesis of thio-vinyl ethers. M. F. Shostakovskii, E. N. Prilezhaeva, and N. I. Uvarova. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 821-7(Engl. translation).—See C.A. 50, 9278e.
B. M. R.

Chem

3 M.A. YOUTZ
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PRILEZHAYEVA, Ye. N.

8

V Synthesis of sulfur compounds based on vinyl ethers and acetylene. XIII. A general method of synthesis of thio vinyl ethers. M. F. Shostakovskii, E. N. Prilezhaeva, and N. I. Uvarova (N. D. Zelinskii Inst. Org. Chem., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1955, 906-12; cf. *C.A.* 50, 7080*f*.—BuSH (106.5 g.), 180 g. dioxane, and 13.2 g. KOH (20 mole-%) satd. with C_2H_2 in an autoclave in the cold, an C_2H_2 pressure of about 30 atm. then maintained 1 hr. at 70-90°, the mixt. dild. with Et_2O, washed with H_2O, and the org. layer distd. gave a series of fractions from which were isolated 96 g. *BuSCH:CH₂*, b_{21} 47.5-8.5°, n_D^{20} 1.4722, d_{20} 0.8693, and 7.5% $(CH_2SBu)_2$. The use of an aq. soln. in the reaction gave but 30% of the sulfide, while EtOH, MePh, or C_4H_4 gave zero yields. Similarly were obtained the following *RSCH:CH₂* (R, % yield, b.p./mm., d_{20}, and n_D^{20} given): *Pr*, 60, 43.5°/50, 0.8723, 1.4734; *Et*, 61, 91.9-2.2°/760, 0.8767, 1.4756;

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SYNTHESIS OF SULFUR . . .

iso-Am, 65, 53.5–4.5°/17, 0.8615, 1.4704; $PhCH_2$, 76.2, 90–90.5°/7, 1.0347, 1.5794; *Ph*, 71.6, 76.5°/4, 1.0417, 1.5888 (this is best run in BuOH 3 hrs. at 145–60°). The disulfides are best obtained by mixing the corresponding mercaptans and thio vinyl ethers in contact with air; the reaction, which commences in a few min., is exothermic and cooling to 20–5° is advised, after which the mixt. is kept overnight and is distd. Thus were obtained (% yield, b.p./mm., n^{20}_D, and d_{20} given): $EtOCH_2CH_2SBu$, 100, 98.5°/3.5, 1.5013, 0.9539; $(CH_2SPh)_2$, 100, 67.5°, —, —; $BuSCH_2CH_2SCH_2CH_2OBu$, 90, 155°/4, 1.4900, 0.9600; $(CH_2SPr)_2$, —, 91–2.5°/3, 1.5046, 0.9565; $(CH_2SBu)_2$, —, 131–2°/6, 1.4967, 0.9355. The vinyl thio ethers are quantitatively cleaved by $HgCl_2$ in EtOH so that this reaction may be used for analytical titration of such compds., yielding RSHgCl, HCl, and $MeCH(OEt)_2$.

G. M. Kosolapoff

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PRILEZHAYEVA, YE. N.

USSR/ Chemistry - Synthesis and conversion

Card 1/2 Pub. 40 - 20/27

Authors : Shostakovskiy, M. F.; Prilezhayeva, Ye. N.; and Uvarova, N. I.

Title : Synthesis of sulfurous substances on the vinyl ether and acetylene basis. Part 11. Ion conversions of vinylethyl sulfide

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 154-162, Jan-Feb 1955

Abstract : It is shown experimentally that ion reactions of vinylethyl sulfide with water, alcohol and halogen hydracid have a certain inherent specificity but by their general nature are closely analogous to vinyl allyl ethers. The conditions most favorable for the hydrolysis of vinylethyl sulfide were established, together with the conditions leading to the addition of

Institution : Acad. of Sc., USSR, The N. D. Zelinskiy Inst. of Org. Chem.

Submitted : November 14, 1953

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Card 2/2 Pub. 40 - 20/27

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 154-162, Jan-Feb 1955

Abstract : the alcohol to the vinylethyl sulfide and the formation of monothioacetal. The conditions most suitable for the hydrohalogenation of vinylethyl sulfide are described. Thirteen references: 8 USSR, 2 USA, 2 German and 1 Dutch (1889-1954). Tables

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PRILEZHAYEVA, Ye.N.

SHOSTAKOVSKIY, M.F.; PRILEZHAYEVA, Ye.N.; UVAROVA, N.I.

Free radical polymerization and copolymerization of thiovinyl esters. Soob.o nauch.rab.chl.VKHO no.3:21-24 '55. (MIRA 10:10)
(Polymerization) (Vinyl alcohol)

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SHOSTAKOVSKIY, M.F.;PRILEZHAYEVA, YE.N.;SHAPIRO, E.S.

Synthesis of sulfurous substances based on vinyl ethers and acetylene. Report no.12. The most effective catalysts in the reaction of hydrogen-sulfide addition to vinyl ethers in disagreement with Markovnikov's rule. Izv. AN SSSR.Otd.khim.nauk no.4:734-741 Jl-Ag '55. (MLRA 9:1)

1.Institut organicheskey khimii imeni N.D.Zelinskogo Akademii nauk SSSR. (Vinyl ethers) (Hydrogen sulfide)

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USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 958

Author: Mastruykova, T. A., Prilezhayeva, Ye. N., Uvarova, N. I., Shostakovskiy, M. F., and Kabachnik, M. I.

Institution: Academy of Sciences USSR

Title: On the Reaction of Dialkyldithiophosphates with Thiovinyl Ethers

Original Periodical: Izv. AN SSSR, Section on Chemical Sciences, 1956, No 4, 443-450

Abstract: It is shown that $(RO)_2PSSH$ (I) combines easily with $CH_2 = CHSR'$ (II) in accordance with Markovinkoff's rule with the formation of $(RO)_2PSSCH(CH_3)SR'$ (III). The following compounds of the type III have been prepared (R, R', the yield in percent, bp in ° C/mm, n_D^{20}, and d_4^{20} are indicated in that order): C_2H_5, C_2H_5 (IV), 70-75, 109-110/2.5, 1.5290, 1.1392; C_2H_5, C_4H_9 (V), 66, 109-110/2, 1.5198, 1.0965; C_2H_5, $C_4H_9OCH_2CH_2$, 80, 123-125/3, 1.5125, 1.0940; iso-C_4H_9, C_2H_5, 78, 113-115/2, 1.5070, 1.0556; iso-C_4H_9, C_4H_9, 90, 121-122/2, 1.5052, 1.0384; iso-C_4H_9, $C_4H_9OCH_2CH_2$, 60-80, 124-126/3, 1.5012,

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USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 958

Abstract: 1.0422. The structure of III was established by their synthesis, carried out as for IV and V, from $(C_2H_5O)_2PSSK$ (VI) and $CH_3CH(SR)Cl$ (VII), as well as by cleavage of III with $HgCl_2$ in alcohol; the latter reaction yields $CH_3CH(OC_2H_5)_2$ (VIII), R'SHgCl (IX) and $(RO)_2PSSHgCl$; the last named disproportionates on purification to $[(PO)_2PSS]_2Hg$ (X) and 2 moles of HCl. The HCl can be titrated quantitatively with 0.1 N NaOH. For the synthesis of IV, 0.05 moles I (R = C_2H_5) are added to 0.068 moles II (R = C_2H_5) at 60-62°; the mixture is stirred for 30 minutes and allowed to stand 12 hours, after which it is distilled. The remaining III can be prepared by the same method. When 0.09 moles VII (R = C_2H_5) are added dropwise to 0.05 moles of VI in 25 ml ether and a mixture heated 3 hours at 40°, followed by filtration of the KCl, IV is obtained from the filtrate in yields of 52%. A similar procedure can be used for the preparation of V in 71% yields from VII (R = C_4H_9) and VI. When 0.0036 moles IV and 0.0081 moles $HgCl_2$ are reacted in 11 ml 96% alcohol, VIII is obtained in yields of 92.9%; the latter reaction also yields HCl (yield 97.7%), 0.8 gms IX (R' = C_2H_5) and 0.7 gms X (R = C_2H_5), mp 121-122° (from benzene; decomposes).

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PRILEZHAYEVA, Ye.N.

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Prilezhayeva, Ye. N.

USSR/Chemistry of High Molecular Substances. F

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 27084.

Author : Shestakovskiy, M.F.; Prilezhayeva, Ye. N.; Tsymbal, L.V.

Inst :

Title : To The Question of Synthesis and Conversions of Vinyl Ethers of Higher Polyatomic Alcohols and Cellulose. II. Vinyl Ethers on Cellulose Base.

Orig Pub: Zh. obshch. khimii, 1956, 26, No. 3, 739 - 745.

Abstract: The conditions of extension of the vinylization reaction of Faworskiy and Shestakovskiy on cellulose were studied. The possibility of the synthesis of vinyl ethers of cellulose at the interaction of alkaline cellulose with acetylene (10 to 15-fold excess of acetylene) in dioxane medium at 130 to 150° in 5 hours' time

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USSR/Chemistry of High Molecular Substances. F

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 27084.

was proved. Vinyl ethers of strongly destructed cellulose (the polymerization factor decreased several tens of times) of an etherification degree of 1.3 to 2.3 are prepared by this method, total yield 65 to 80%. The etherification degree of vinyl ethers of cellulose was determined by the method of quantitative hydrolysis in an acid medium. See RZhKhim, 1955, 16428 for the preceding report.

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PRILEZHAYEVA, Ie. N.

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[illegible] substance showed good [illegible] with systemic action

G. M. Kosolapoff

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