NAZAROVA, T.N.

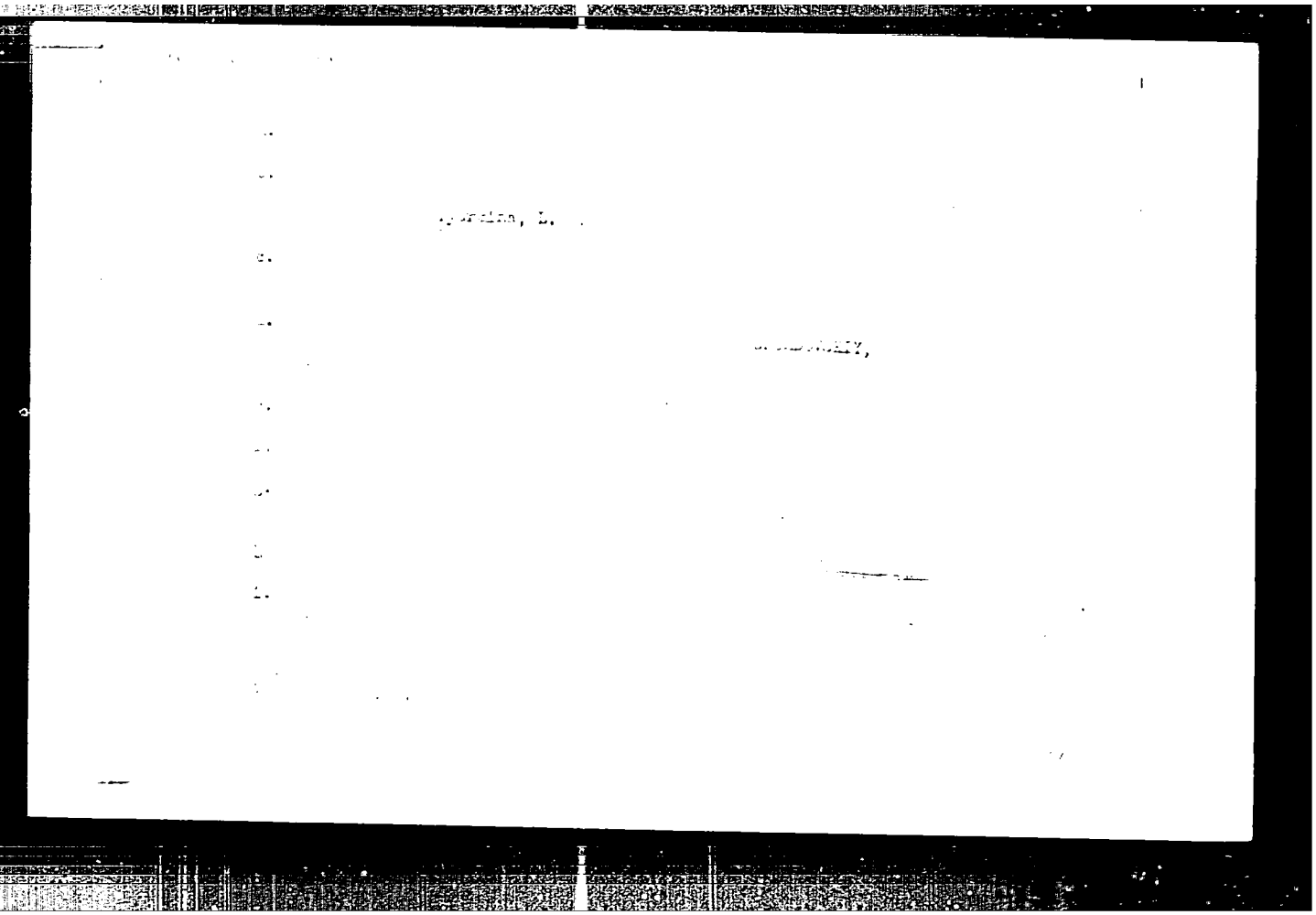
Investigating meteoric particles on the third Soviet artificial earth satellite. Isk.sput.Zem. no.4:165-170 '60.
(MIRA 13:5)

(Artificial satellites) (Meteors)

NAZAROVA, T.N.

Results of investigating meteoric matter with instruments mounted in cosmic rockets. Isk.sput.Zem. no.5:38-40 '60. (MIRA 13:5)

(Meteors) (Lunar probes)



3.2000
3 2440

S/560/62/000/012/012/014
I063/I263

AUTHOR: Nazarova, T.N.

TITLE: Investigation of the meteoric dust on rockets and artificial earth satellites

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no 12. Moscow, 1962, 141-145

TEXT: Measurements of the meteoric dust density, carried out on 6 Soviet rockets and one satellite (Nazarova, T.N., Akademiya nauk SSSR, Iskusstvennyye sputniki Zemli no.4, 1960, 165 and no.5, 1950, 38) within the height range of 100 km and 47,000 km are worked out and compared with similar American measurements. The number of meteoric particles striking the rockets were registered by piezo crystals and their mass calculated on the assumption of

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Investigation of the meteoric dust...

a particle-rocket collision velocity of 15 km/sec. All results are reduced to the same sensitivity of $mass_{min} = 10^{-8} g$. The measurements show that the density of the meteoric particles depends on the height. In the range of 100-300 km a high collision frequency of the order of 10^{-1} m^{-2} sec^{-1} was observed and only small time-dependent fluctuations were registered. In the range of 400-2000 km, the collision frequency is much lower - 10^{-3} m^{-2} sec^{-1}. Here sporadic changes were observed in both Soviet and American experiments, the frequency value varying from 4-11 m^{-2} sec^{-1} down to $5 \cdot 10^{-4}$ m^{-2} sec^{-1}. At heights of 10^4-10^5 km., the decrease in meteoric dust density is much smaller, but, lacking sufficient experimental data, it is impossible to decide whether this decrease is real or due to fluctuations of the meteoric material. There are 1 figure and 1

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S/560/62/000/012/012/014
I063/I263

Investigation of the meteoric dust...

table. The most important English language references are: H.E. La Gow, W.M. Alexander, Space Research, V.I. North-Hall, Publ. Co., Amsterdam 1960, p.1033, M. Dubin, Space Research, V.I. North-Hall, Publ. Co., Amsterdam, 1960, p.1042

SUBMITTED: August 10, 1961

Card 3/3

L 18188-63 EPA(b)/EWT(1)/FCC(w)/BDS/EEC-2/ES(v) AFFTC/AFMDC/ESD-3/
APGC Pi-4, Pe-4/Pi-4/Po-4/Pg-4 TT/GW
ACCESSION NR: AP3007347 S/0293/63/001/001/0169/0171

AUTHOR: Nazarova, T. N.; Bektabegov, A. K.; Komissarov, O. D.

TITLE: Preliminary results of the investigation of meteoric matter along the trajectory of the Mars-1 interplanetary station

SOURCE: Kosmicheskiye issledovaniya, v. 1, no. 1, 1963, 169-171

TOPIC TAGS: interplanetary station, Mars 1, meteoric matter, terrestrial orbit, piezoelectric transmitter, meteoric impacts, particle mass, accumulation, spatial density, Taurid straam

ABSTRACT: The flight of the Mars-1 interplanetary station made possible the investigation of meteoric matter beyond the terrestrial orbit. The meteor particles were recorded by a piezoelectric transmitter with a 1.5-m² meteor-impact sensitive area. On 1 November 1962 Mars-1 passed the Taurid stream at a distance of 6600 to 4200 km from the earth. During a 100-minute period, 60 meteor impacts were recorded. The particle masses were $\geq 10^{-7}$ g. The particles

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moved in space as individual accumulations separated from each other by distances of 4000 to 45,000 km. The variable spatial density of the particles can be visualized as a system of cubes 60 to 140 m on a side each containing a meteor particle. At a distance of 23 to 25 million km from the earth the Mars-1 met another meteor stream like the Taurid stream, consisting of individual accumulations at distances of 8000 to 190,000 km from each other.
"The authors thank A. A. Ly*kova, N. V. Leonova, and V. V. Malikov for their help with the project, and A. K. Platonov for his help in processing the results. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 15May63 DATE ACQ: 21Oct63 ENCL: 00

SUB CODE: AS NO REF SOV: 000 OTHER: 000

L 40260-63 EWT(1)/EWG(v)/EEC-4/EWA(d)/EEC(t)/EEC(c)-2 P-5/P-2 GW-2

ACCESSION NR: AR5009056 S/0313/65/000/003/0029/0029

SOURCE: Ref. zh. Issledovaniye kosmicheskogo prostranstva. Otd. vyp, Abs. 3.62.205

AUTHOR: Nazarova, T. N.

TITLE: Study of meteor matter

CITED SOURCE: Geof. byul. Mezhduved. geofiz. kom-t pri Prezidiume AN SSSR, 1964, No. 14, 89-91

TOPIC TAGS: meteor matter, artificial earth satellite, space rocket, dust cloud, interplanetary space, interplanetary dust

TRANSLATION: This article reports the brief results of the recording of meteor particles using instruments carried aboard space rockets and artificial earth satellites. It follows from all the collected data that the earth is surrounded by a dense dust cloud at a height of 100-300 km above its surface. P. B.

SUB CODE: SV, AA ENCL: 00

Card 1/1

L 3232-66 FSS-2/EWT(l)/EWT(m)/FS(v)-3/EWA(d)/EWP(t)/EWP(z)/EWP(b) PT/JL/GS/GW

ACCESSION NR: AT5023640 UR/0000/65/000/000/0572/0576

AUTHOR: Nazarova, T. N.

TITLE: Investigation of meteoritic material

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 572-576

TOPIC TAGS: meteor, interplanetary dust

ABSTRACT: An investigation of meteoritic material near the earth by rocket and satellite measurements is discussed. The existence of three clouds of meteoritic particles, with linear dimensions of 3-5 million km, was established by the satellite "Elektron-2" during the early part of 1964. One cloud was sufficiently dense to determine the direction of its motion. The results of collision frequency measurements are given, and the obtained mass distribution is compared with the average cumulative curve for the meteoritic particle mass distribution in the vicinity of the earth obtained from observations by a number of other American and Soviet rockets and satellites. It is pointed out that such extended

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L 3232-66

ACCESSION NR: AT5023640

and dense interplanetary clouds and streams of meteoritic particles (unobserved from the earth) represent a danger to cosmic rockets. Much further study is required to be able to predict their locations. Orig. art. has: 2 formulas and 2 figures. [04]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: AA, SV

NO REF SOV: 005 OTHER: 005 A.T.D. PRESS 4/106

Card 2/2

L 52772-65 FSS-2/EWT(l/EWG(v)/EWA(d)/EEC-4/EEC(t) Po-4/Pd-1/Pe-5/Pq-4/
Pac-4/Pae-2/Pi-4 TT/GW-2
ACCESSION NR: AT5009976 UR/3010/65/000/014/0089/0091

AUTHOR: Nazarova, T. N.

TITLE: The study of meteoric matter

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Geofizicheskiy byulleten', no. 14, 1965, 89-91

TOPIC TAGS: meteoric matter, IGY meteor study, meteor sensing device, interplanetary meteor, Taurid meteor current

ABSTRACT: During the International Geophysical Year (IGY), studies of meteoric matter were carried out by direct methods using instrumentation mounted on rockets and satellites. The instrumentation consisted of ballistic piezo-sensing elements of varying construction developed by L. Z. Rusakov and A. K. Bektabegov from a proposal by M. A. Isakovich and N. A. Roy. The amplifier-converters were built by O. D. Komissarov and L. N. Neugodov. The sensing elements recorded the number of particle impacts and detector pulses, which are proportional (according to the theoretical calculations of K. P. Stanyukovich) to the energy of the incident particle. M. A. Lavrent'yev proposed another approach in which the pulse is made proportional to $f(mv^{1.6})$. The results of these studies are shown in Table 1 of the Enclosure. The article contains other data concerning the size and sensitivity of

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L 52772-65
ACCESSION NR: AT5009976

the equipment, discusses various possible theoretical interpretations of the data, and mentions the study of interplanetary meteoric matter carried out by station Mars 1. The piezoelectric sensing elements were located on the back side of the solar batteries; the device registered impacts of meteoric particles with masses above 10^{-7} g. The sensitive surface was about 1.5 m^2. During its flight, the station encountered the Taurid meteor current. At distances between 6,600 and 42,000 km from the Earth, the device registered 60 encounters corresponding to an average impact frequency of $7.10^{-3} m^2 \cdot sec^{-1}$ (after corrections for the angle of incidence with the sensitive surface). Although the processing of the experimental data is not yet complete, the density of meteoric objects within the Taurid current seems to be some 700 times higher than the density of sporadic meteoric objects of comparable mass within the rest of interplanetary space. No impacts were registered during the contacts with the station in December of 1962. Orig. art has: 1 table.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 01 SUB CODE: AA, SV

NO REF SOV: 000 OTHER: 000

Card 2/3

L 02975-67 FSS-2/EWT(1) TT/GW
ACC NR: AP6032858 SOURCE CODE: UR/0020/66/170/003/0578/0579

AUTHOR: Nazarova, T. N.; Rybakov, A. K.; Komissarov, G. D.

ORG: Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, Academy of Sciences, SSSR (Institut geokhimii i analiticheskoy khimii Akademii nauk SSSR)

TITLE: Preliminary results of an investigation of solid interplanetary matter in the vicinity of the moon

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 578-579

TOPIC TAGS: meteor stream, lunar orbit, lunar satellite, LUNAR ENVIRONMENT

ABSTRACT: Piezoelectric sensors covering 1.2 m^2 of Luna-10's surface were used to register in the vicinity of the moon the impacts of meteor particles with velocities of 15 km/sec and mass in excess of 7×10^{-8} g. During one orbit (altitude, 355—1050 km), the sensors registered a total of 198 impacts, i.e., 4×10^{-3} impacts/$m^2 \cdot$sec. The maximum incidence was observed at the apogee and perigee, and the minimum, at 800 km. The data support the hypothesis that the high impact incidence in the immediate vicinity of the moon is caused by the secondary emission of particles from the moon as a result of the impact of primary meteor particles. The maximum velocity of secondary particles is 1—3 km/sec. The authors

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L 02975-67
ACC NR: AP6032858

are indebted to Academician A. P. Vinogradov for his valuable suggestions in preparing the experiment and interpreting the results, as well as to M. L. Lidov, E. I. Andriankin, and Z. V. Vasyukova. Orig. art. has: 2 figures.

SUB CODE: 03/ SUBM DATE: 28June65/ ATD PRESS: 5099

Card 2/2

ACC NR: AP7000547 SOURCE CODE: UR/0293/66/ /006/0900/0909

AUTHOR: Nazarova, T. N.

ORG: none

TITLE: Investigation of meteoritic dust by rockets and satellites

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 900-909

TOPIC TAGS: meteor detection, geophysic rocket, artificial earth satellite, space probe

ABSTRACT: The results of meteor dust investigation by means of the [illegible] space probes and satellites during the period 1957 to 1966 are discussed. Measurements were made by piezoelectric counters mounted on geophysical rockets, artificial earth satellites, and several deep space probes (Luna-3, Mars-1, and Venera-2). The data show that, in general, the spatial distribution of meteor dust decreases as the distance from the earth increases. A log-log plot of number of meteor impacts per square meter per second versus meteor mass shows the expected linear dependence. The data also indicate both a spatial as well as a time variation in meteor dust distribution in the earth's vicinity. As an example, a detailed distribution of a meteor "shower" is shown around the earth during the period 30-31 January, 1964. Data received from the deep space probe (Mars-1) are analyzed in some detail. Two plots are given depicting number of meteor impacts as a function of distance away from the sun (in millions of

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ACC NR: AP7000547

kilometers) as well as towards the sun. The two results are obviously symmetric. The average number of collisions in each case is found to be 5.7×10^{-5} and 7.8×10^{-5} impacts/m^2sec, respectively. In conclusion, the author expresses her gratitude to a large number of colleagues for taking part in designing and building the required equipment, reducing the data, and analyzing the results of the measurement. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 03, 22/ SUBM DATE: 01Aug66/ ORIG REF: 009/ OTH REF: 013

Card 2/2

ACC NR: AP7000548 SOURCE CODE: UR/0293/66/004/006/0911

AUTHORS: Nazarova, T. N.; Rybakov, A. K.; Komissarov, G. D.

ORG: none

TITLE: Preliminary results from the investigation of solid interplanetary matter in the vicinity of the moon

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 910-912

TOPIC TAGS: moon, lunar flight, lunar environment, lunar orbit, lunar probe, lunar satellite, meteor detection, meteorite, interplanetary space, spacecraft auxiliary equipment, spacecraft data analysis

ABSTRACT: Piezoelectric gauges carried by the moon's artificial satellite "Luna-10" registered, within 11 hr 50 min between 3 April and 12 May 1966, a total of 198 meteoritic impacts. Total area of the gauges was 1.2 m^2, and they were sensitive to the impacts of particles of masses $7 \cdot 10^{-8}$ g and up, moving with a velocity of 15 km/sec. This number of impacts exceeds by two orders the mean number in interplanetary space. The number of particles is tabulated for the elevations of 350--1050 km (in 50 km intervals) above the lunar surface. The authors propose that these particles were of lunar origin and were thrown out by the explosions of lunar rocks hit by meteoritic bodies. A part of the particles then assumed orbital paths around

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ACC NR: AP7000548

the moon at a velocity of 1--3 km/sec. At this velocity the least registered mass of the particle would be about 10^{-6} g, and the density of particles near the moon would exceed the mean for interplanetary space by over four orders. The authors thank A. P. Vinogradov for his guidance in preparing the experiment and interpreting the results, M. L. Lidov and E. I. Andriankin for their participation in data evaluation, and Z. V. Vasyukova for help with data processing. Orig. art. has: 1 table and 1 chart.

SUB CODE: 03,22/SUBM DATE: none

Card 2/2

NAZAROVA, T. S.

"Synthesis and catalytic transformations of gem-substituted cyclanes," S. S. Novikov, S. L. Khrapova, and T. S. Nazarova, [G. O. Zelinskiĭ Inst. Org. Chem.] Acad. Sci. USSR. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim Nauk* 1957, 604-10.—MeMgI and cyclopentanone gave 1-methylcyclopentanol, converted to the chloride which with Et_2Zn gave 1-methyl-1-ethylcyclopentane (I), b. 121–2°, n_D^{20} 1.4272, d_4^{20} 0.7804. ClH_2CCH_2Cl with 1-methylcyclopentylmagnesium chloride gave *1-methyl-1-allylcyclopentane*, b_{18} 53°, 1.4445, 0.8093, hydrogenated over Pt to 1-methyl-1-propylcyclopentane (II), b_{760} 144.9°, 1.4373, 0.7851. Friedel-Crafts condensation of CCl_4 with 1-methylcyclohexanol gave (1-methylcyclohexyl)benzene, hydrogenated over Pt-C to *(1-methylcyclohexyl)cyclohexane* (III), b_5 104.5–5°, 1.4824, 0.9337. I passed over 10% Pt-C at 320° in an H atm. gave $PrCMe_2Et$, EtPh, *o*-, *m*-, and *p*-xylenes, Et_2CMe, and BuCHMeEt. II similarly gave PrPh, disubstituted benzenes (*o*-, *m*-, *p*-isomers), $EtCMe_2Et$, Et_4, nonane isomers, and 1,1,3-trimethylcyclohexane. III gave fluorene, 1-methyl-1-phenylcyclohexane, mixed MeC_6H_4Ph isomers, and 85% Ph_2.

G. M. Kosolapoff

KLYUCHAREV, A.P. [Kliuchariev, O.P.]; MIKOLAYCHUK, A.D.; NAZAROVA, T.S.

Production of hafnium and germanium foil for nuclear research.
Ukr. fiz. zhur. 7 no.9:1027 S '62. (MIRA 15:12)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.
(Hafnium) (Germanium)

L 18248-63 EWT(d)/EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4 JD/HW/JG

ACCESSION NR: AP3002116 S/0185/63/008/006/0628/0632

AUTHOR: Karev, V. M.; Klyucharev, A. P.; Nazarova, T. S.; Ny*kolaychuk, A. D.; Reshetova, L. M.

TITLE: Investigation of foils obtained by thermal dissociation method

SOURCE: Ukrains'kyy fizychnyy zhurnal, v. 8, no. 6, 1963, 628-632

TOPIC TAGS: pyrolytic deposition, thermal dissociation, Ti target, Zr target, Hf target, nuclear target, beam target, Mo impurity, Ti foil, Zr foil, Hr foil, foil target, iodide dissociation, target preparation.

ABSTRACT: Results are given of investigations directed toward the reduction of molybdenum impurities in foils (targets for nuclear measurements) of Ti, Zr and Hf, which were obtained by the thermal dissociation method (pyrolytic deposition). The effect of iodide dissociation temperature on the quantity of Mo impurities was studied. For this purpose, intermediate layers of carbon were used, resulting in a decrease in Mo content by about one-half. The dissociation temperatures were varied between 850 C and 1200 C. Composition of the foils studied is given in Table 1, the effect of carbon layers on Mo content -- in Table 2, and the results of chemical and X-ray spectrum analysis are given in Table 3.

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L 18248-63

ACCESSION NR: AP3002116

The latter method of analysis is the more suitable since it does not require destroying the expensive isotope targets. The X-ray spectrum method allows not only the determination of the percent content but also the foil thickness at any point. The results are represented graphically. Orig. art. has: 2 formulas, 2 figures and 3 tables.

ASSOCIATION: Fiziko-Tekhnichny*y Insty*tut AN URSR, Kharkov (Physics-Technical Institute of the UkrSSR Acad. Sc.)

SUBMITTED: 12 Dec 62 DATE ACQ: 12 Jul 63 ENCL: 00

SUB CODE: NS, PH NO REF SOV: 007 OTHER: 00

Card 2/2

L 53745-65 EWG(j)/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4/Pr-4/Ps-4/Peb/Pu-4 DIAAP/LJP(c) JD/WW/HW/JD

ACCESSION NR: AP5015449 UR/0185/65/010/006/0692/0693

AUTHOR: Karyev, V. M.; Klyucharyev, O. P.; Lishenko, L. H.; Nazarova, T. S. 55

TITLE: Preparation of isotopic foils from ytterbium oxide 50

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 6, 1965, 692-693 B

TOPIC TAGS: ytterbium, ytterbium oxide, ytterbium oxide reduction, isotopic ytterbium foil, ytterbium foil preparation, foil vacuum deposition

ABSTRACT: Experiments have been made to develop an efficient method for obtaining pure isotopic ytterbium foil by reduction of ytterbium oxide (Yb_2O_3) by La, Ca, Be, Ti, and Zr in vacuum. A mixture of ground Yb_2O_3 and La (the latter taken with a 100% excess over the theoretical amount) was placed in a molybdenum crucible with a tantalum lining and degassed in a vacuum varied from $1 \cdot 10^{-5}$ to $2—4 \cdot 10^{-6}$ mm Hg. The reduction of Yb_2O_3 proceeded at 1000—1200C; the foils deposited on stainless-steel, molybdenum, or tantalum substrates contained 1—2% La. Reduction with Ca

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and Be was unsatisfactory because of the higher reduction temperatures required and because of contamination, which made the foils brittle. Reduction of Yb_2O_3 by 99.99%-pure Ti or Zr gave the best results. The reduction proceeded at lower temperatures (850 and 1000C) than the reduction with La, and the obtained foils contained only an insignificant amount of Ti and no Zr. The ratio of the components in the charge had a great bearing on the yield of metallic Yb. In reduction of Yb_2O_3 with Zr, a maximum yield of Yb was obtained with the 1:2 ratio. Isotopic Yb foils, 3—4 μ thick, which did not deteriorate with storing in air, were readily obtained by the reduction of 100 mg of Yb_2O_3 with zirconium powder. Orig. art. has 2 figures. [MS]

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR, Kharkiv (Physicotechnical Institute, AN URSR)

SUBMITTED: 20Mar65 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 005 OTHER: 002 ATD PRESS: 4019

SEMIKHATOVA, S.V.; NAZAROVA, V.A.; ROSTOVTSEVA, L.F.; NALIVKIN, D.V., akademik.

The Turneisk and lower part of Vizeisk strata of the Orel river region in the Dnieper-Donets depression. Dokl.AN SSSR 92 no.1:147-150 S '53.
(MLRA 6:8)

1. Akademiya nauk SSSR (for Nalivkin). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnykh gazov (for Semikhatova, Nazarova and Rostovtseva).
(Orel valley--Geology, Stratigraphic) (Geology, Stratigraphic--Orel valley)

NAZAROVA, V.A.

Stratigraphy of the boundary layers of the Devonian and Carboniferous in the southern part of the Don-Medveditsa upheaval. Dokl. AN SSSR 94 no.3:541-544 Ja '54. (MLRA 7:1)

1 Predstavleno akademikom D.V.Nalivkinym.
(Don Valley--Geology, Stratigraphic) (Geology, Stratigraphic--Don Valley) (Medveditsa Valley--Geology, Stratigraphic) (Geology, Stratigraphic--Medveditsa Valley)

KOLESNIKOVA, T.I.; NAZAROVA, V.D.; BADALOV, S.A.; RADIONOV, K.G.; OSTAPENKO, Ye.G.; LEONT'YEV, Yu.N.

Using modified starch in case of drilling in salt-bearing sediments in eastern Turkmenistan. Burenie no.7:20-22 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki i kontora razvedochnogo bureniya No.5 tresta "Turkmenneftegazrazvedka".

KISTER, E.G.; ZLOTNIK, D.Ye.; POPKOVA, L.M.; NAZAROVA, V.L.; SHASKOL'-SKAYA, T.P.

Combination chromate reagents for flushing fluids. Burenie no.9:17-18 '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki.

NAZAROVA, V.F.

New model of a calibrometric attachment for Gullstrand's large nonreflexogenic ophthalmoscope. Vest. oft. 74 no.2:57-60 '61. (MIRA 14:4)

(OPHTHALMOSCOPE)

NAZAROVA, V.F.

Effect of the irregular movement of a spinning machine on yarn breakage. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.2:55-60 '63. (MIRA 16:6)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Spinning machinery)

NAZAROVA, V.F.

Studying the performance of spinning machines during the starting period. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.1:54-60 '64.
(MIRA 18:2)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni Kirova.

NAZAROVA, V. G. Cand Biol Sci -- (diss) "On the problem of the effect of the nervous system upon the catalase of peripheral blood (Experimental study)." Saratov, 1959. 19 pp (Min of Education RSFSR. Saratov State Ped Inst), 150 copies (KL, 43-59, 122)

MURAV'YEV, I.A.; MAZAROVA, V.G.

Feasibility of requiring and possibility of obtaining transparent aqueous solutions of a thick extract of Altopa belladonna. Apt. delo 8 no.1:74-78 Ja-F '59. (MIRA 12:2)

1. Iz kafedry tekhnologii lekarstv i galenovykh preparatov Pyatigorskogo farmatsevticheskogo instituta.
(BELLADONNA)

L 33317-65 EWP(e)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b) Pf-4 IJP(c)
JD

ACCESSION NR: AP5003378 S/0136/65/000/001/0090/0094

AUTHOR: Garmata, V.A.; Kramnik, V. Yu.; Arutyunov, E.A.; Nazarova, V.I.

TITLE: Influence of humidifying titanium sponge on ingot hardness

SOURCE: Tsvetnyye metally, no. 1, 1965, 90-94

TOPIC TAGS: titanium sponge, titanium hardening, ingot hardness, moisture content, cast titanium

ABSTRACT: Titanium sponge prepared by the thermal magnesium method has a large surface area of pores and readily attracts moisture from the air. The moisture bound to magnesium chloride reacts with molten titanium, adds gaseous impurities and increases Ti hardness. Tests showed that ingots cast from initial sponge as compared to those from [illegible] Ti [illegible] sponge are 6.5 HB softer. [illegible] HB increases much more in hardness (32.4 HB [illegible]). Tests refer to laboratory tests in a vacuum furnace (no industrial tests were made). If humidified sponge is dried prior to melting, its hardening decreases by 10 - 41 HB (depending on the initial hardness of the sponge material). The authors conclude that the receiving departments of titanium manufacturing plants should determine the ingot hardness of sponge delivered to them only after having

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L 33317-65
ACCESSION NR: AP5003378

desiccated the sponge prior to test melting. It seems that the chlorine content does not affect the moisture absorption capacity of titanium sponge. A different hardness of the upper and lower surfaces of an ingot is an indication that the sponge contained moisture (partial evaporation during melting). Original art. has: 5 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 010 OTHER: 000

Card 2/2

NAZAROVA, V.I.; RYBAKOVA, Yu.S.

Examining the structure of a praline-type candy mass. Izv. vys.ucheb.zav.; pishch.tekh. no.2:134-135 '59. (MIRA 12:8)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.

(Confectionery) (Photomicrography)

GARMATA, V.A.; KRAMNIK, V. Yu.; ARUTYUNOV, R.A.; NAZAROVA, V.I.

Effect of wetting sponge titanium on the hardness of the ingot.
Tsvet. met. 38 no.1:90-94 Ja '65 (MIRA 18:2)

20820
S/048/61/025/003/008/047
B104/B201

9.4150 (also 1137, 38, 1395)

AUTHOR: Nazarova, V.P.

TITLE: Cathodoluminescence of strontium phosphates activated with europium

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 332 - 335

TEXT: This is a reproduction of a lecture delivered at the 9th Conference on Luminescence (Crystal Phosphors), which took place in Kiyev from June 20 to 25, 1960. The author wanted to find new cathodoluminophores possessing a blue luminescence and a short extinction time. It has already been shown in a previous paper by the author that γ-$Ca_2P_2O_7$-Eu is a strongly violet-blue luminescent cathodoluminophore with a brief damping time ($< 10^{-4}$ sec). Europium-activated strontium phosphates were examined with the aid of a decomposable cathode device under a constant electron beam, accelerated with 15 - 17 kv and a current density of about $1 \cdot 10^{-7}$ a cm^2. The emission spectrum was examined with the aid of a monochromator and a

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photomultiplier. The main parameters of the luminophores investigated are listed in Table 1. Table 2 gives the spectra as functions of the impurities. As is typical of luminophores activated with trivalent rare earths, no line spectrum could be found. It is finally stated that the $Sr_3(PO_4)_2$-Eu luminophore offers the best prospects for use in the practice. Its violet-blue luminescence with a band with λ_{max} = 4250 Å and an extinction time of 10^{-4} seconds has an intensity that is 25 - 35 % of that of the ZnS-Ag luminophore. This result was obtained by measurements with a Sb-Cs photomultiplier having a maximum sensitivity at 4300 Å. Europium in the luminophore is in the bivalent state, which fact explains the marked change of λ_{max} on a change of the chemical composition or of the lattice structure as well as the absence of a line spectrum. It further follows from the experiments that rare-earth impurities reduce the cathodoluminescence of europium-activated phosphates. The rare earths should not exceed 10^{-4} % in these phosphates. S.Ya. Gutner and Ye.K. Raspletina are thanked for their study of cathodoluminescence and Yu.P. Kozlova for

Cathodoluminescence of ...

having prepared the specimen. There are 1 figure, 2 tables and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English language publication reads as follows: Ranby P.W., Nesh D.N., Hendersen, S.H., Brit.C.Appl.Phys. Suppl., No.4, 18, (1955)

Таблица 1

№ п.п	1) Люминофор	2) Цвет свечения во время возбуждения	3) $\lambda_{макс}$ полосы излучения, Å	4) Полуширина полосы излучения, Å	5) Относительная интенсивность свечения, %
1	$Sr(PO_3)_2$ — Eu	A Фиолетовый	4130	430	1.0÷2.0
2	β-$Sr_2P_2O_7$ — Eu	B Фиолетово-синий	4230	580	1.0
3	α-$Sr_2P_2O_7$ — Eu	C Фиолетовый	4150	430	5.0÷8.0
4	$Sr_3(PO_4)_2$ — Eu	D Синий	4250	430	25÷35.0

Legend to Table 1: 1) luminophore, 2) luminous color during excitation, 3) λ_{max} of the emission band in A, 4) half-width of emission band in A, 5) relative intensity in %. A) violet, B) blue-violet, C) violet, D) blue

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Cathodoluminescence of ...

Legend to Table 2:
1) rare-earth impurities in %, 2) luminescence spectrum in A, 3) relative intensity in %. Damping time up to 1% of original intensity in seconds.

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Cathodoluminescence of ...

Таблица 2

№ п/п	Примесь (легирующая добавка), %	Спектр свечения, Å	Относительная интенсивность, %	Длительность затухания до 1/2 интенсивности, сек
1	—		100,0	$< 10^{-4}$
2	10^{-5} Dy		100,0	$< 10^{-4}$
3	10^{-4} Dy		100,0	$< 10^{-4}$
4	10^{-3} Dy		98,5	$1 \cdot 10^{-4}$
5	10^{-2} Dy		90,2	$2 \cdot 10^{-3}$
6	10^{-1} Dy		12,7	$1 \cdot 10^{-2}$
1	—		100,0	$< 10^{-4}$
2	10^{-5} Sm		100,0	$< 10^{-4}$
3	10^{-4} Sm		91,0	$1 \cdot 10^{-4}$
4	10^{-3} Sm		94,5	$2 \cdot 10^{-4}$
5	10^{-2} Sm		86,5	$3 \cdot 10^{-4}$
6	10^{-1} Sm		40,0	10^{-3}
1	—		100,0	$< 10^{-4}$
2	10^{-5} Tb		100,0	$< 10^{-4}$
3	10^{-4} Tb		100,0	$1 \cdot 10^{-3}$
4	10^{-3} Tb		100,0	$3 \cdot 10^{-3}$
5	10^{-2} Tb		93,0	$6 \cdot 10^{-2}$
6	10^{-1} Tb		32,0	—

Card 5/5

SADOVNICHIY, B.Ye., uchitel' khimii; NAZAROVA, V.S., uchitel' khimii

Device for demonstrating the explosion of detonating gas.
Khim.v shkole 14 no.5:80 S-O '59. (MIRA 12:12)

1. Orchikovskaya srednyaya shkola Khar'kovskoy oblasti.
(Explosions) (Chemical apparatus)

SADOVNICHIY, B.Ye., uchitel' khimii; NAZAROVA, V.S., uchitel'nitsa khimii

Movable exhaust hood. Khim.v shkole 15 no.1:71-72 Ja-F '60.
(MIRA 13:5)

1. Orchikovskaya srednyaya shkola Khar'kovskoy oblasti.
(Exhaust systems)

M

: [illegible]
: Cultivated [illegible] Cereals.

: [illegible] 63323

: [illegible], [illegible]
: Poltava ~~Institute of~~ [illegible] ture
: [illegible] Bacterial Fertilizers on the Development and Yield of Winter Wheat Grown after a [illegible] Preceding [illegible]
: [illegible] 1956 [illegible], 5, [illegible]

: Results of the [illegible] trial carried out at a kolkhoz in Poltavskaya oblast' on a plot tilled by three methods: [illegible] plowing of the stubble according to Mal'tsev, [illegible] plowing to 25 cm [illegible] to 25 cm with [illegible] seeds of [illegible] were [illegible] with commercial agar azotobacterin and commercial liquid phosphorobacterin. Phosphorobacterin produces increases in the grain yield in all variants of tilling. A yield within the range of the control was obtained with the application of either commercial or local azotobacterin. — O.V. Yakushkina

[illegible] : 1/1

NAZAROVA, V.V., kand.biol.nauk (Poltava)

Michurin's theory refutes the fables of religion. Nauka i zhyttia 6 no.9:27-29 S '56. (MIRA 13:9)
(Michurin, Ivan Vladimirovich, 1855-1935)
(Atheism)

39072
S/080/62/035/006/004/013
D204/D307

11 2120

AUTHORS: Khamskiy, Ye. V. and Nazarova, Ye. G.

TITLE: The introduction of iron ions into crystals of ammonium nitrate

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 6, 1962, 1206-1209

TEXT: The introduction of Fe into the NH_4NO_3 lattice was studied since such additions may improve the hygroscopic and keeping properties of the nitrate. The effects of the rate of crystallization, concentration of $Fe(NO_3)_3$ in the solution (c), and of stirring on the amount of Fe introduced into NH_4NO_3 crystals were investigated. Solutions containing 4.2 - 20.7% $Fe(NO_3)_3$ and 80.6 - 51.4% NH_4NO_3 were crystallized, beginning the crystallizations at 95, 60 or 45°C. The crystals were filtered, washed with 60% aq. NH_4NO_3 and analyzed. The amounts of Fe in the crystals increased with increas-

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ing rate of crystallization and with rising c, but fell on stirring. When the relative supersaturation of NH_4NO_3 (s) was 0.04 - 0.08, with c ≅ 15%, the amount of Fe in the crystals did not exceed 0.1%. This quantity could be raised to 0.12 - 0.18% by increasing s to ~0.08 and C to 18 - 20%. To improve the hygroscopic properties of NH_4NO_3 the amount of foreign ion should be appreciable and evenly distributed throughout the NH_4NO_3 crystal. Blank areas should be particularly avoided. There are 2 tables.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza. Novomoskovskiy filial (State Scientific Research and Planning Institute of the Nitrogen Industry and Organic Synthetic Products. New Moscow Branch)

SUBMITTED: June 5, 1961

Card 2/2

NAZAROVA, Ye.I., inzh.; ANFIMOV, V.M.

Investigating certain physicomechanical properties of titanium and its alloy with aluminum. Trudy LMZ no.9:37-45 '62. (MIRA 16:6)

(Titanium—Testing)

GLIKMAN, L.A., doktor tekhn.nauk; TEKHT, V.P., kand.[illegible]
NAZAROVA, Ye.I., inzh.

Removal of residual stresses in [illegible] of aluminum by means of tempering. Trudy LMZ [illegible].

(Titanium alloys—Heat tre[illegible]

SADOV, F.I.; KALININA, K.G.; NAZAROVA, Ye.F.

Vat color printing of fabrics made from acetate fibers. Izv.vys. ucheb.zav.; tekh.tekst.prom. no.2:107-111 '63. (MIRA 16:6)

1. Moskovskiy tekstil'nyy institut.
(Textile printing) (Rayon)

AUTHORS: Mol[illegible]vskiy, B. L., Nemerova, Ye. V. SOV [illegible]-5

TITLE: The Determination of the Inhibitor Dicyclohexylammonitrite in Paper (O opredelenii ingibitora nitrita ditsiklogeksilamina v bumage)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 817 - 817 (USSR)

ABSTRACT: Recently this volatile corrosion inhibitor has been widely used. Paper is impregnated with it and then metal objects to be protected are wrapped in the paper. The determination of the inhibitor by a titration with permanganate yields only inaccurate results, as the paper contains substances which are oxidized by the permanganate. A method of analysis was worked out. It consists of a volatilization of the free nitrite and a subsequent titration. The paper samples are placed in a retort with the inhibitor. The retort contains distilled water and caustic soda. A K'yel'dal- (K'yel'dal)flask with a cooler is mounted on top of it. Part of the mixture is distilled off. The portion of the nitrite of the amine which remained in the cooler is washed out with alcohol. It is combined with the distillate and then titrated in 0,1 n hydrochloric acid solution

Card 1/2

The Determination of [illegible] Dicyclohexylamine-nitrite in Paper SOV/32-2[illegible]-7-15/[illegible]5

in the presence of bromothymol blue. Th[illegible] of [illegible]onium salts in the [illegible] in the dicyclohexylamine disturbs this method of [illegible].

ASSOCIATION: Len[illegible] [illegible] (Le[illegible] Institute of [illegible] Synthetic Fuels)

Card 2/2

SUVOROVSKAYA, N.A.; TYURIN, B.F.; ZYUZINA, Yu.D.; NAZAROVA, Yu.G.

Studying the effect of hardeners on the characteristics of epoxy resin base coatings. Lakokras.mat.i ikh prim. no.5:4-10 '62. (MIRA 16:1)
(Protective coatings—Testing) (Epoxy resins)

GROSMAN, Yu.S.; NAZAROVA, Z.A.

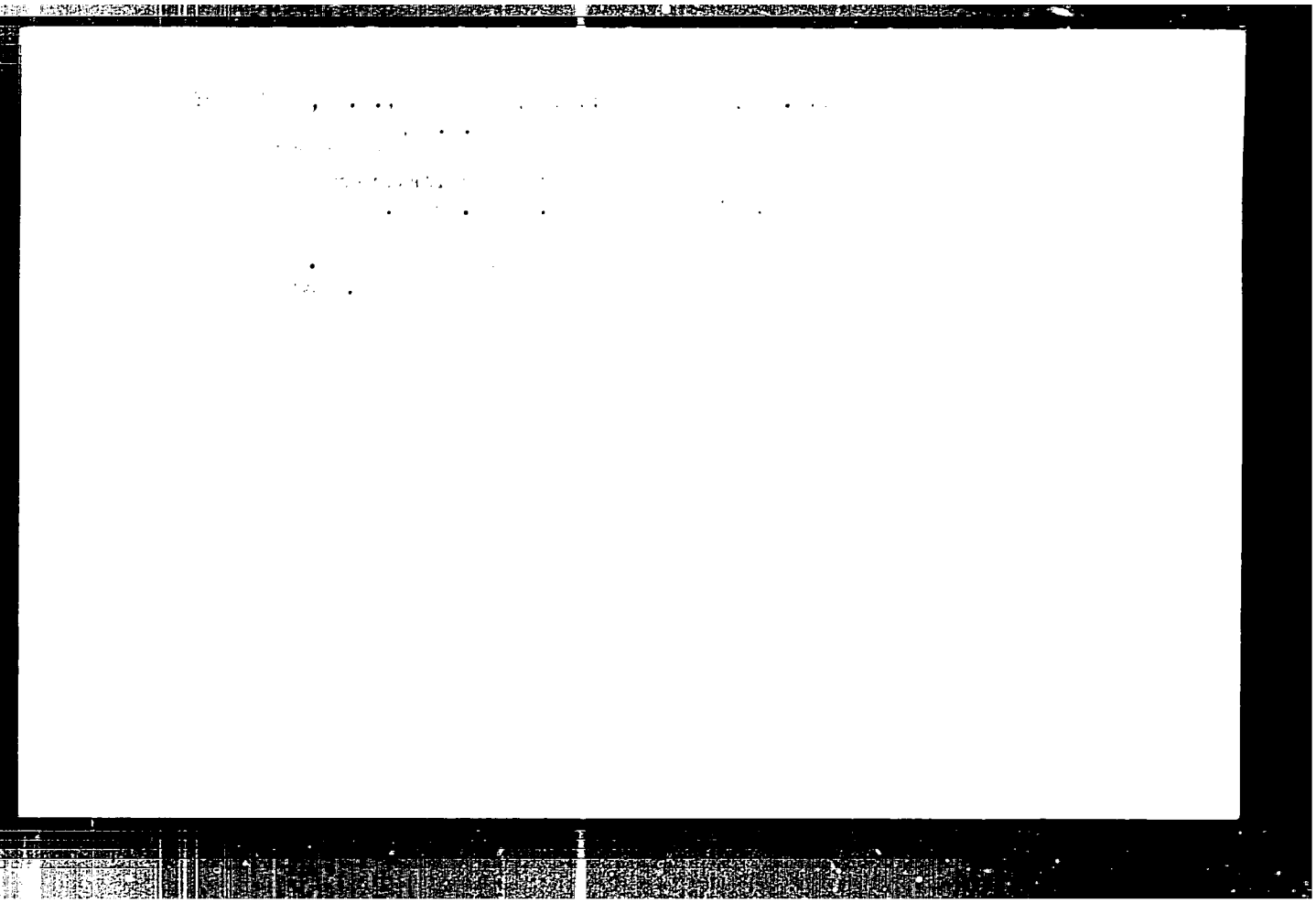
Effect of vitamins C, PP, and B_2 on the course of acute poisoning from orthonitrochlorobenzene [with summary in English]. Farm. i toks. 20 no.3:82-86 My-Je '57. (MIRA 10:10)

1. Kafedra farmakologii Molotovskogo meditsinskogo instituta.
(NITROBENZENE, related compounds,
orthonitrochlorobenzine pois., eff. of vitamins B_2, C, & PP in animals (Rus))
(VITAMIN C, effects,
on exper. orthonitrochlorobenzene pois. (Rus))
(VITAMIN B2, effects,
same)
(NICOTINIC ACID, effects,
same)

NAZAROVA, Z.P.; BATOG, A.Ye.; YENAL'YEV, V.D.; ROMANTSEVICH, M.K.

Condensation of tertiary amyl hydroperoxide with some carbonyl compounds. Zhur. ob. khim. 34 no.7:2430-2432 Jl '64 (MIRA 17:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut plastmass, Donetsk.



PHASE I BOOK EXPLOITATION SOV/3450

Termicheskaya obrabotka i svoystva krupnykh pokovok (Heat Treatment and Properties of Large Forgings), Moscow, Mashgiz, 1959. 165 p. 4,000 copies printed.

Reviewer: K.N. Sokolov, Candidate of Technical Sciences; Ed.: P.V. Sklyuyev, Candidate of Technical Sciences; Tech. Ed.: N.A.Dugina; Exec. Ed.(Ural-Siberian Division, Mashgiz): A.V. Kaletina, Engineer.

PURPOSE: This book is intended for technical personnel working in the shops, laboratories, and design offices of plants manufacturing heavy machinery and electrical equipment. It may also be of some interest to research personnel.

COVERAGE: This collection of articles describes methods employed by Uralmashzavod (Ural Heavy Machinery Plant, Sverdlovsk) for heat-treating heavy forgings. Research conducted at the plant is also discussed. Data for computing cooling rates in the quenching and normalizing of heavy forgings are given. A considerable portion of the book is devoted to information on the mechanical properties of rotors for heavy turbogenerators and one-piece steam-turbine rotors at various points along the body and neck of these parts. The main defects occurring in rotors of these types are described, their causes

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Heat Treatment and Properties of Large Forgings SOV/3450

are analyzed, and methods of handling the problem are explained. Results of a study of heavy forgings made of vacuum-treated steel are given. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

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Heat Treatment and Properties of Large Forgings SOV/3450

VALYDOV, V.V., kand. tekhn. nauk; GRANKIN, I.G., inzh.; NAZAROVA, Z.G., inzh.; ZHUKOVIN, D.I., inzh.

Use of an ultrasonic viscosimeter to determine the viscosity of tar solutions used to chemically reinforce rocks. Nauch. soob. IGD 20:122-126 '63. (MIRA 16:10)

(Viscosimeter) (Tar--Testing)

ALESKOVSKIY, V.B.; DOBYCHIN, S.L.; KEDRINSKIY, I.A.; MILLER, A.D.; MIKHEYEVA, A.I.; MOKHOV, A.A.; NAZAROVA, Z.N.

Determination of trace elements in natural waters after a preliminary concentration by the method of "sinking particles." (MIRA 15:4)
Trudy LTI no.48:12-21 '58.
(Trace elements) (Water, Underground)

L 04726-67 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l).

ACC NR: AT6026437 (N) SOURCE CODE: UR/3210/66/000/004/0154/0164

JD/HW/EM

AUTHOR: Semenov, O. A. (Candidate of technical sciences); Lisitsyn, A. I. (Engineer); Odintsov, B. P. (Engineer); Nazarova, Z. M. (Engineer); Siromashenko, A. M. (Engineer)

ORG: none

TITLE: Optical investigation of the stressed state in the rolls of the KhPT-75 tube mill in connection with its conversion to twin-groove rolling

SOURCE: Ukraine. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya, Metallurgiya i koksokhimiya, no. 4, 1966, Obrabotka metallov davleniyem (Metalworking by pressure), 154-164

TOPIC TAGS: metal rolling, rolling mill, stress analysis, photoelasticity / EC-6 epoxy resin, KhPT-75 ROLLING MILL

ABSTRACT: The conversion of the currently operating cold-rolling tube mills to twin-groove operation makes it possible to increase their productivity by 50-75%. However, the simultaneous rolling of two tubes greatly increases the working load on the elements and components of the mill. This raises the question of assuring the operating reliability and strength of the rolls in these conditions. To resolve this question, the authors investigated the stressed state of

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ACC NR: AT6026437

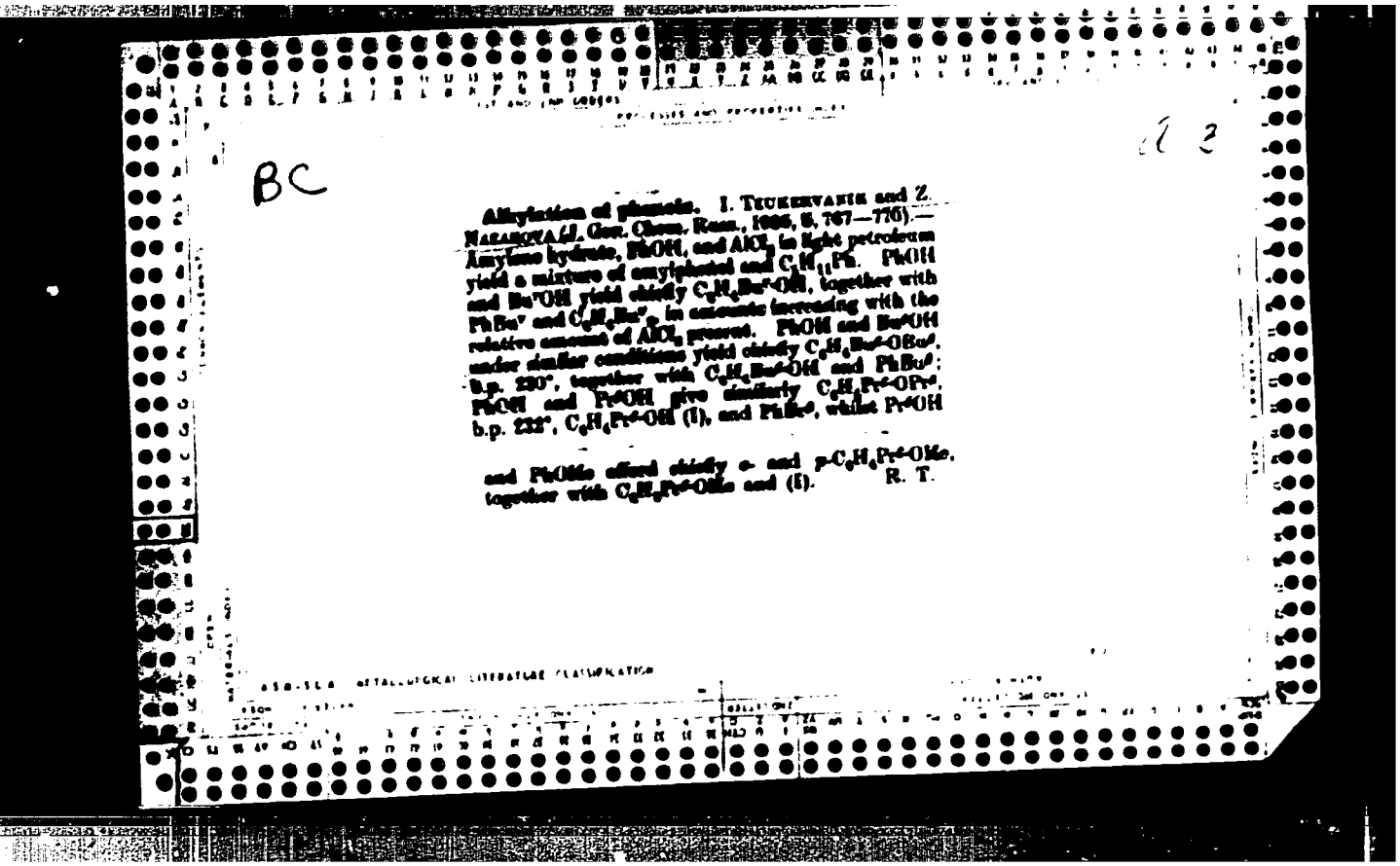
the rolls by the photoelasticity method,[26] a method which consists in that the load-caused change in optical properties at points in a model of an optically translucent material may be measured and expressed in quantities mathematically associated with the stress. This method was used to investigate single- and double-groove roll models constructed of an optically active material based on the ED-6 epoxy resin and built and stressed in accordance with the conditions of geometric and stress similarity. Findings: an analysis of the cross-sectional distribution of stresses in the rolls indicates that points along the contour are subject to the highes stresses. A comparison of the curves of contour stresses for single- and double-groove rolls shows that the maximum tensile stresses in the single-groove roll are roughly 20% higher than in the identically loaded double-groove roll. Therefore, the double-groove roll may withstand higher loads. Therefore also, the replacement of the single-groove rolls with double-groove rolls is, from the standpoint of roll strength, definitely feasible and does not lead to an increase in the stressed state of the roll given the same working load. Orig. art. has: 5 figures, 2 formulas.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 004

Card 2/2

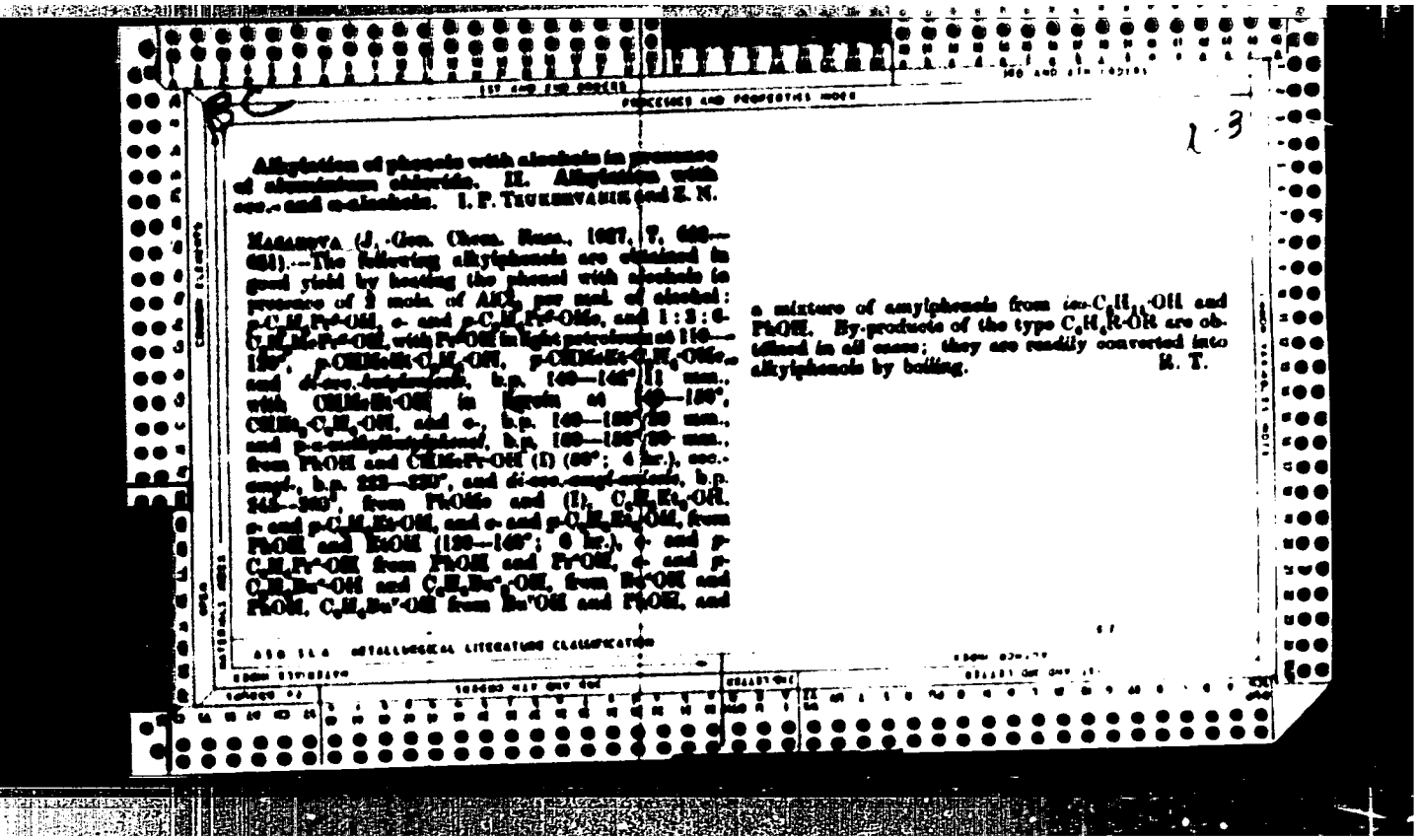
MILLER, A.D.; LIBINA, R.I.; NAZAROVA, Z.N.

Determination of micrograms of lead, copper, and silver in natural waters after concentration by the method of coprecipitation with calcium carbonate. Trudy LTI no.48:109-118 '58. (MIRA 13:6)
(Metals--Analysis) (Water, Underground)

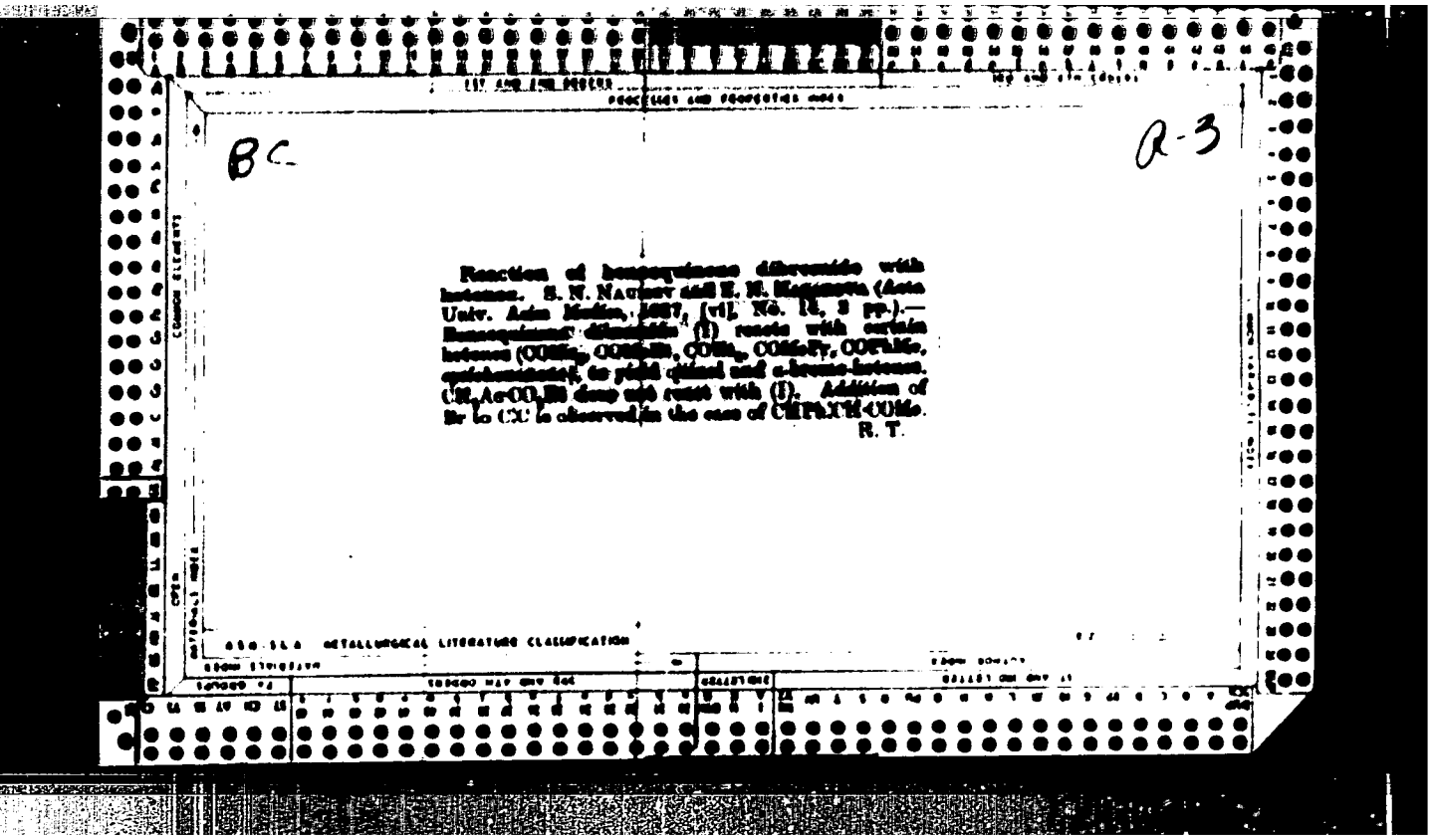


BC

Alkylation of phenols. I. Teterevatik and Z. Nazarova. *J. Gen. Chem. Russ.*, 1936, 6, 767—776).—Amylene hydrate, PhOH, and $AlCl_3$ in light petroleum yield a mixture of amylphenol and $C_6H_{11}Ph$. PhOH and Bu$^{\gamma}$OH yield chiefly $C_6H_4Bu^{\gamma}$-OH, together with $PhBu^{\gamma}$ and $C_6H_3Bu^{\gamma}_2$, in amounts increasing with the relative amount of $AlCl_3$ present. PhOH and Bu$^{\alpha}$OH under similar conditions yield chiefly $C_6H_4Bu^{\alpha}$-OBu$^{\alpha}$, b.p. 230°, together with $C_6H_4Bu^{\alpha}$-OH and $PhBu^{\alpha}$; PhOH and Pr$^{\beta}$OH give similarly $C_6H_4Pr^{\beta}$-OPr$^{\beta}$, b.p. 222°, $C_6H_4Pr^{\beta}$-OH (I), and $PhBu^{\beta}$, whilst Pr$^{\beta}$OH and PhOMe afford chiefly o- and p-$C_6H_4Pr^{\beta}$-OMe, together with $C_6H_3Pr^{\beta}$-OMe and (I). R. T.



Alkylation of phenols with alcohols in presence of aluminium chloride. II. Alkylation with sec.- and n-alcohols. I. P. TSUKERVANIK and E. N. KARAPETYAN (J. Gen. Chem. Russ., 1937, 7, 680—691).—The following alkylphenols are obtained in good yield by heating the phenol with alcohols in presence of 2 mols. of $AlCl_3$ per mol. of alcohol: p-$C_6H_4Pr^{\beta}$-OH, o- and p-$C_6H_4Pr^{\alpha}$-OH, and 1 : 3 : 6-$C_6H_3Me_2Pr^{\alpha}$-OH, with Pr^{α}OH in light petroleum at 110—150°; p-$CHMeEt$-C_6H_4-OH, p-$CHMeEt$-C_6H_4-OMe, and di-sec.-heptylphenols, b.p. 140—145° (1 mm.), with $CHMeEt$-OH in ligroin at 140—150°; $CHMe_2$-C_6H_4-OH, mixed o-, b.p. 100—105° (20 mm.), and p-o-methylisopropylphenol, b.p. 100—105° (20 mm.), from PrOH and $CHMeEt$-OH (I) (60°; 4 hr.), sec.-amyl-, b.p. 220—230°, and di-sec.-amyl-anisole, b.p. 245—260°, from PrOMe and (I), $C_6H_4Et_2$-OH, o- and p-C_6H_4Et-OH, and o- and p-$C_6H_4Et_2$-OH, from PrOH and EtOH (120—140°; 6 hr.), o- and p-$C_6H_4Pr^{\alpha}$-OH from PrOH and Pr^{α}OH, o- and p-$C_6H_4Bu^{\alpha}$-OH and $C_6H_3Bu^{\alpha}_2$-OH, from Bu^{α}OH and PrOH, $C_6H_4Bu^{\alpha}$-OH from Bu^{α}OH and PrOH, and a mixture of amylphenols from iso-C_5H_{11}-OH and PrOH. By-products of the type C_6H_4R-OR are obtained in all cases; they are readily converted into alkylphenols by boiling. R. T.

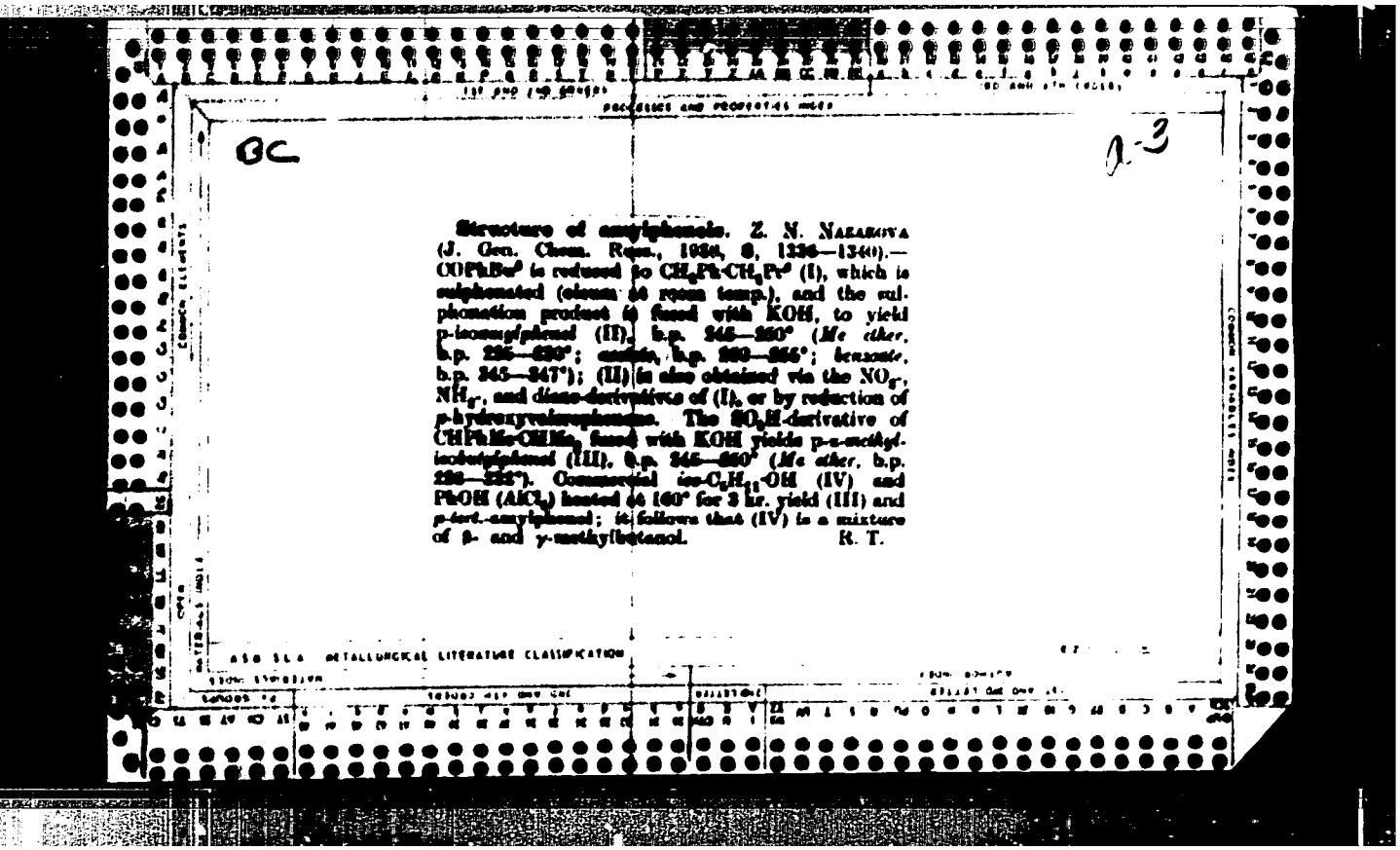


BC

R-3

Reaction of benzoquinone diimmonide with ketones. S. N. Nazarov and E. M. Kaganova (Acta Univ. Asiae Mediae, 1957, [vi], No. 12, 3 pp.).—Benzoquinone diimmonide (I) reacts with certain ketones ($COMe_2$, $COMeEt$, $COMe_2$, $COMePr$, $COPhMe$, cyclohexanone), to yield quinol and α-ketone-ketone. (CH_2Ac)$_2CO$ does not react with (I). Addition of Br to CC is observed in the case of CH_2XCOMe.

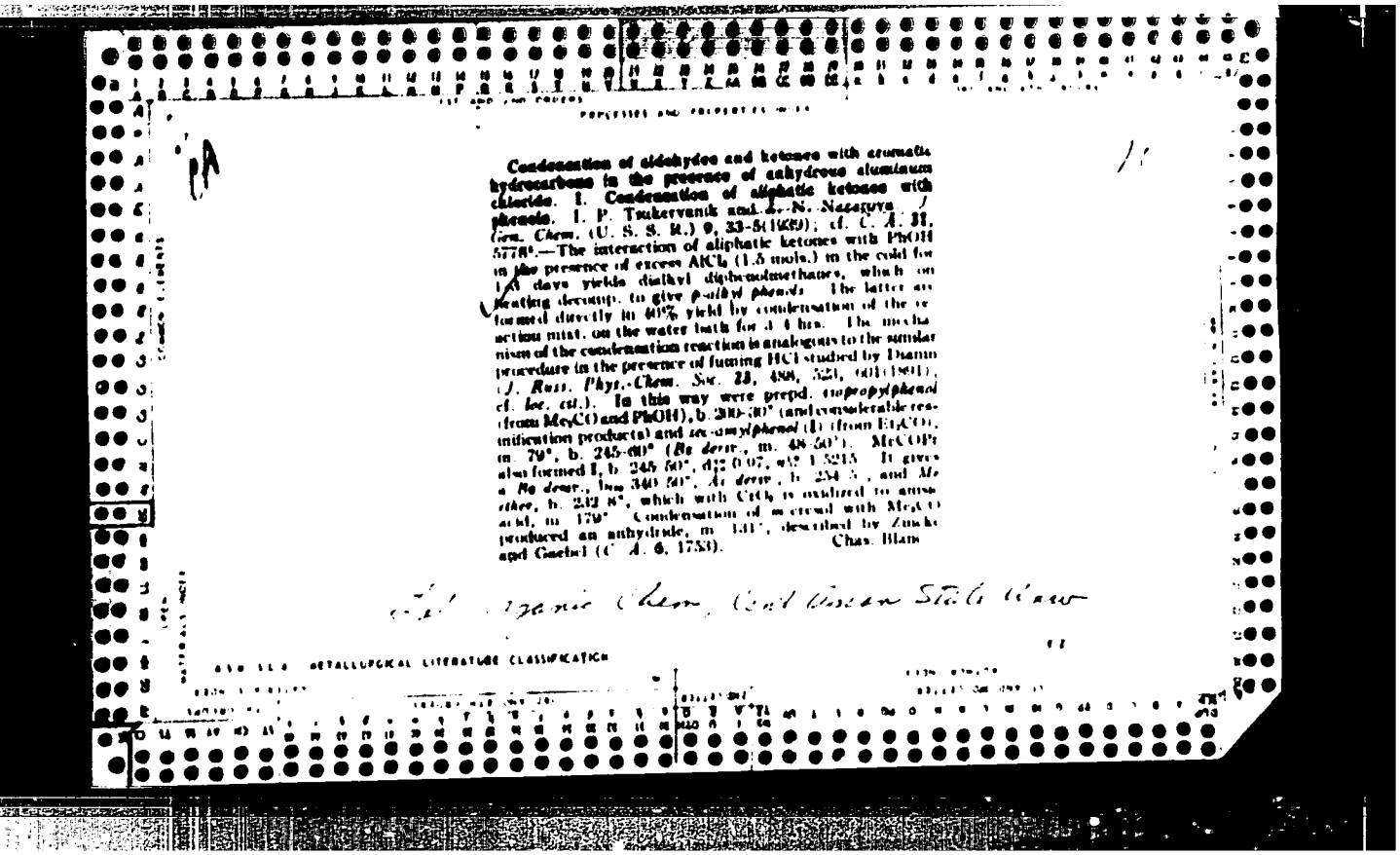
R. T.



BC

1-3

Structure of amylphenols. Z. N. NAZAROVA (J. Gen. Chem. Russ., 1938, **8**, 1336—1340).—$COPhBu^{\beta}$ is reduced to $CH_2Ph{\cdot}CH_2Pr^{\beta}$ (I), which is sulphonated (oleum at room temp.), and the sulphonation product is fused with KOH, to yield p-isoamylphenol (II), b.p. 345—350° (*Me ether*, b.p. 225—230°; *acetate*, b.p. 260—265°; *benzoate*, b.p. 345—347°); (II) is also obtained via the NO_2-, NH_2-, and diazo-derivatives of (I), or by reduction of p-hydroxyvalerophenone. The SO_3H-derivative of $CHPhMe{\cdot}CHMe_2$ fused with KOH yields p-α-methylisobutylphenol (III), b.p. 245—250° (*Me ether*, b.p. 230—235°). Commercial *iso*-$C_5H_{11}{\cdot}OH$ (IV) and PhOH ($AlCl_3$) heated at 60° for 3 hr. yield (III) and p-*tert.*-amylphenol; it follows that (IV) is a mixture of β- and γ-methylbutanol. R. T.



Condensation of aldehydes and ketones with aromatic hydrocarbons in the presence of anhydrous aluminum chloride. I. Condensation of aliphatic ketones with phenols. I. P. Tsukervanik and Z. N. Nazarova. *J. Gen. Chem.* (U. S. S. R.) 9, 33-5(1939); cf. *C. A.* 31, 5778⁸.—The interaction of aliphatic ketones with PhOH in the presence of excess $AlCl_3$ (1.5 mols.) in the cold for 1-3 days yields dialkyl diphenylmethanes, which on heating decomp. to give *p*-alkyl phenols. The latter are formed directly in 40% yield by condensation of the reaction mixt. on the water bath for 3-4 hrs. The mechanism of the condensation reaction is analogous to the similar procedure in the presence of fuming HCl studied by Damm (*J. Russ. Phys.-Chem. Soc.* 23, 488, 521, 601 (1891); cf. *loc. cit.*). In this way were prepd. *o*-isopropylphenol (from Me_2CO and PhOH), b. 208-9° (and considerable resinification products) and *sec*-amylphenol (I) (from Et_2CO), m. 79°, b. 245-6° (*Bz deriv.*, m. 48-50°). $MeCOPr^i$ also formed I, b. 245-50°, d_{15}^{15} 0.97, n_D^{15} 1.5215. It gives a *Bz deriv.*, b. 340-50°. *Ac deriv.*, b. 254-5°, and *Me ether*, b. 242-8°, which with CrO_3 is oxidized to anisic acid, m. 179°. Condensation of m-cresol with Me_2CO produced an anhydride, m. 131°, described by Zincke and Goetzel (*C. A.* 6, 1753). Chas. Blanc

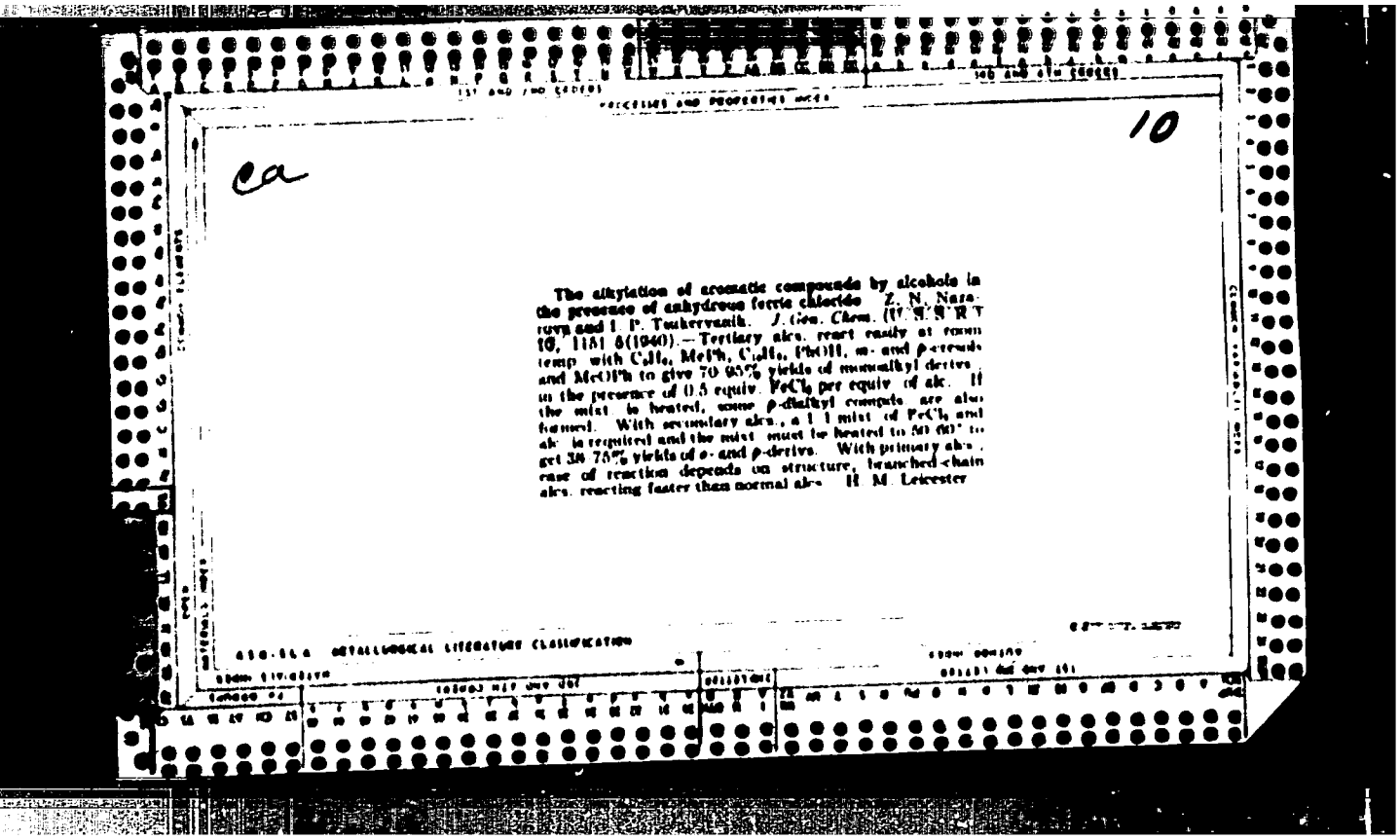
Ind. Organic Chem., Coal Tar and Stock Chem.

A.S.M. METALLURGICAL LITERATURE CLASSIFICATION

MARKOV, B. V. : TOVBIN, I. P.

"The Alkylation of Aromatic Compounds with Alcohols, with the Presence of Anhydrous Ferric Chloride," Zhur. Obshch. Khim, 19, No. 12, 1949. Lab. of Org. Chem., Central Asiatic State Univ. Received 19 February 1949.

U-1618, 3 Jan. 1951.



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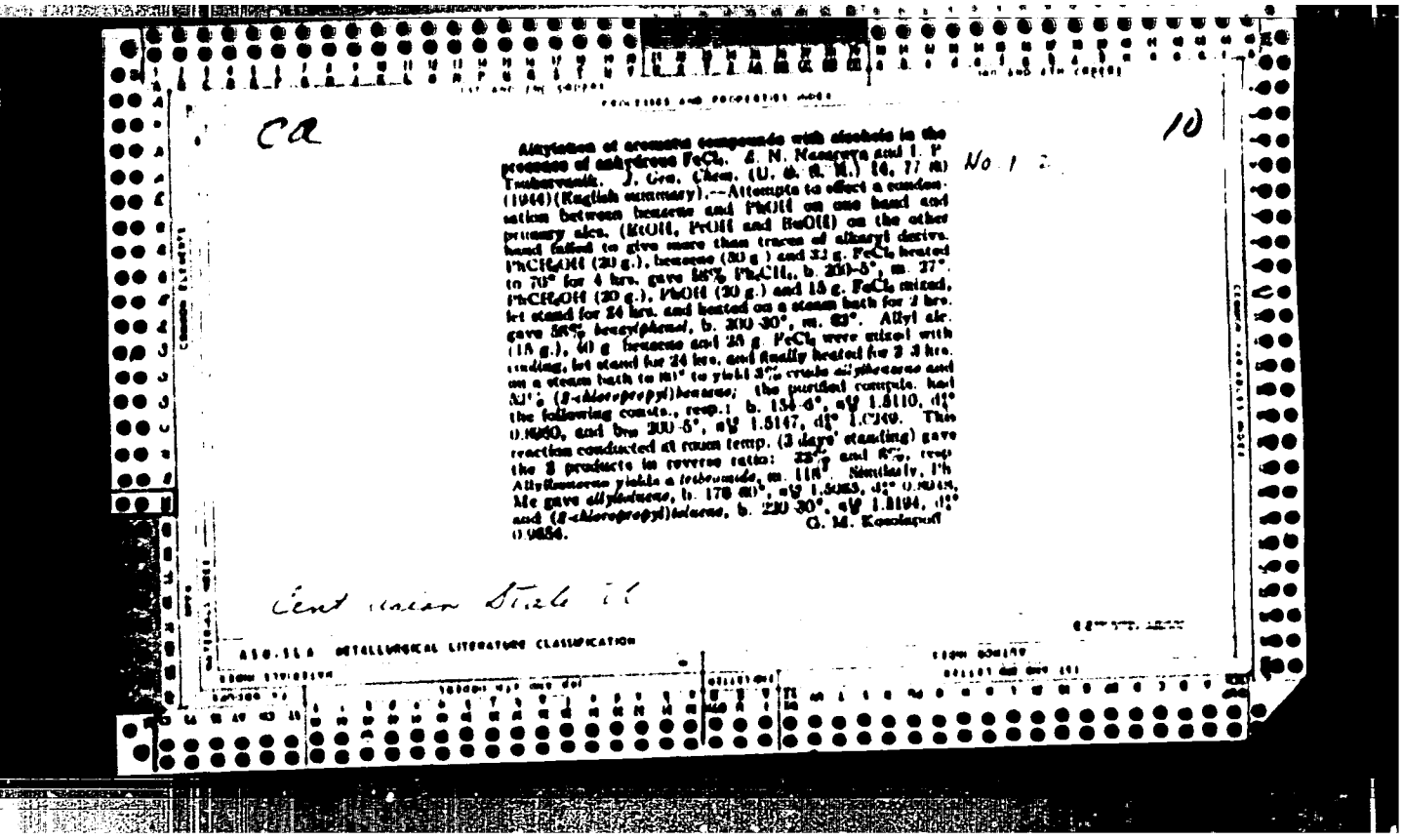
ca

The alkylation of aromatic compounds by alcohols in the presence of anhydrous ferric chloride Z. N. Nazarova and I. P. Tsukervanik. *J. Gen. Chem.* (U.S.S.R.) 10, 1151-6(1940).—Tertiary alcs. react easily at room temp. with C_6H_6, MeC_6H_5, $C_6H_4Me_2$, $PhCH_2OH$, *m*- and *p*-cresols and $MeOC_6H_5$ to give 70-95% yields of monoalkyl derivs. in the presence of 0.5 equiv. $FeCl_3$ per equiv. of alc. If the mixt. is heated, some *p*-dialkyl compds. are also formed. With secondary alcs., a 1:1 mixt. of $FeCl_3$ and alc. is required and the mixt. must be heated to 80-90° to get 38-75% yields of *o*- and *p*-derivs. With primary alcs., ease of reaction depends on structure, branched-chain alcs. reacting faster than normal alcs. H. M. Leicester



CA

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Alkylation of aromatic compounds with alcohols in the presence of anhydrous $FeCl_3$. A. N. Nesmeyanov and I. P. Tsukervanik. J. Gen. Chem. (U. S. S. R.) 14, 77-83 (1944)(English summary).—Attempts to effect a condensation between benzene and PhOH on one hand and primary alcs. (EtOH, PrOH and BuOH) on the other hand failed to give more than traces of alkaryl derivs. $PhCH_2OH$ (20 g.), benzene (30 g.) and 32 g. $FeCl_3$ heated to 70° for 4 hrs. gave 16% Ph_2CH_2, b. 260–5°, m. 27°. $PhCH_2OH$ (20 g.), PhOH (30 g.) and 15 g. $FeCl_3$ mixed, let stand for 24 hrs. and heated on a steam bath for 2 hrs. gave 56% *benzylphenol*, b. 300–30°, m. 82°. Allyl alc. (15 g.), 60 g. benzene and 20 g. $FeCl_3$ were mixed with cooling, let stand for 24 hrs. and finally heated for 2 3 hrs. on a steam bath (to 80° to yield 3% crude *allylbenzene* and 30% (*β-chloropropyl*)*benzene*; the purified compds. had the following consts., resp.: b. 154.6°, n_D^{20} 1.5110, d_4^{20} 0.9880, and bro 200–5°, n_D^{20} 1.5167, d_4^{20} 1.0749. This reaction conducted at room temp. (3 days' standing) gave the 2 products in reverse ratio: 23% and 8%, resp. Allylbenzene yields a *tribromide*, m. 118°. Similarly, PhMe gave *allyltoluene*, b. 178–80°, n_D^{20} 1.5083, d_4^{20} 0.9048, and (*β-chloropropyl*)*toluene*, b. 220–30°, n_D^{20} 1.5194, d_4^{20} 0.9856.

G. M. Kosolapoff

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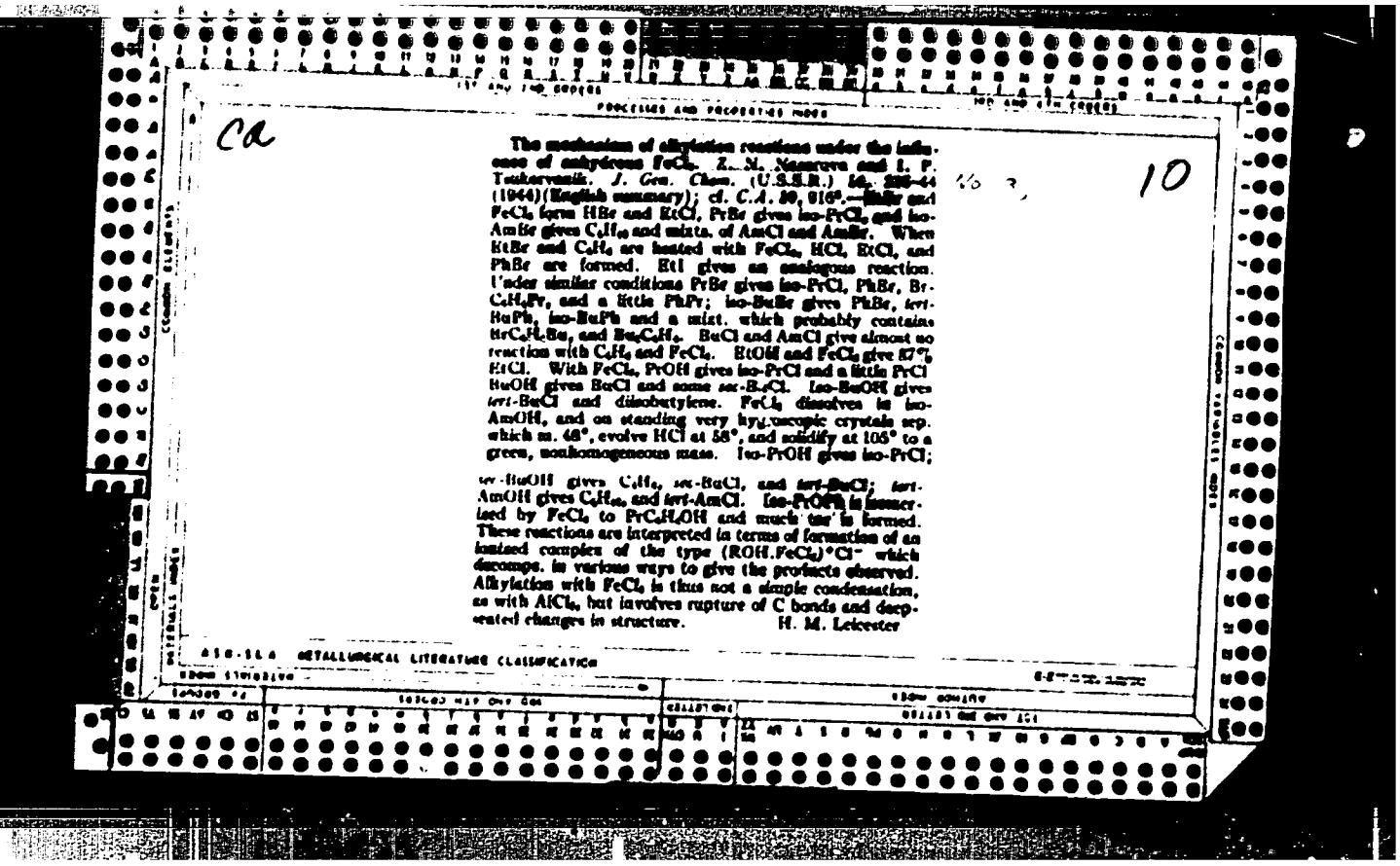
A50-51A METALLURGICAL LITERATURE CLASSIFICATION



CA

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The mechanism of alkylation reactions under the influence of anhydrous $FeCl_3$. Z. M. Manuyrova and I. P. Tsukervanik. *J. Gen. Chem.* (U.S.S.R.) 14, 286-44 (1944)(English summary); cf. *C.A.* 39, 916⁸.—Halide and $FeCl_3$ form HBr and EtCl, PrBr gives iso-PrCl, and iso-AmBr gives C_5H_{10} and mixts. of AmCl and AmBr. When EtBr and C_6H_6 are heated with $FeCl_3$, HCl, EtCl, and PhBr are formed. EtI gives an analogous reaction. Under similar conditions PrBr gives iso-PrCl, PhBr, Br-C_6H_4Pr, and a little $PhPr$; iso-BuBr gives PhBr, *tert*-BuPh, iso-BuPh and a mist., which probably contains BrC_6H_4Bu, and $Bu_2C_6H_4$. BuCl and AmCl give almost no reaction with C_6H_6 and $FeCl_3$. EtOH and $FeCl_3$ give 87% EtCl. With $FeCl_3$, PrOH gives iso-PrCl and a little PrCl. BuOH gives BuCl and some *sec*-B_2Cl. Iso-BuOH gives *tert*-BuCl and diisobutylene. $FeCl_3$ dissolves in iso-AmOH, and on standing very hygroscopic crystals sep. which m. 48°, evolve HCl at 58°, and solidify at 105° to a green, nonhomogeneous mass. Iso-PrOH gives iso-PrCl; *sec*-BuOH gives C_4H_8, *sec*-BuCl, and *tert*-BuCl; *tert*-AmOH gives C_5H_{10} and *tert*-AmCl. Iso-PrOH is isomerized by $FeCl_3$ to PrC_2H_4OH and much tar is formed. These reactions are interpreted in terms of formation of an ionized complex of the type $(ROH.FeCl_3)^+Cl^-$ which decomps. in various ways to give the products observed. Alkylation with $FeCl_3$ is thus not a simple condensation, as with $AlCl_3$, but involves rupture of C bonds and deep-seated changes in structure. H. M. Leicester

NAZAROVA, Z. N.

Condensation of acid esters of sulfuric acid and esters of chlorosulfonic acid with benzene. (Mrs.) Z. Nazarova and I. P. Tsukervanik. *J. Gen. Chem.* (U.S.S.R.) 18, 4-9 (1918)(in Russian). It was shown that the reaction of individual acid sulfates (Et and Pr) with C_6H_6 does not lead to alkylation. Alkyl chlorosulfonates on heating with C_6H_6 (below thermal dissocn.) yield alkylbenzenes and other products. Distn. of 52.3 g. SO_3 into 30 ml. EtOH with good cooling gave ethylsulfuric acid (I), n_D^{20} 1.4105, d_4^{18} 1.3657; mixing 15 g. I and 25 g. $AgHSO_4$ (from the fusion of equimol. amts. of Ag_2SO_4 and 100% H_2SO_4) followed by washing with dry Et_2O and filtration of the mixt., after the spontaneous reaction, gave the same product, n_D^{20} 1.4135. Heating 25 g. I and 50 ml. C_6H_6 6 hrs. on a water bath failed to give any alkylbenzenes, a similar failure resulted after 18 hrs. at 180° in sealed tubes. Propylsulfuric acid could not be prepd. satisfactorily from SO_3 and PrOH; heating 40 g. $AgHSO_4$ and 24 g. PrBr on a steam bath gave a dark oil, which could not be purified by distn.; heating this product with C_6H_6 gave no reaction while addn. of a little $AlCl_3$ initiated alkylation immediately and gave PrPh. Iso-$BuOSO_2Cl$, on standing for several days over satd. KOH soln. gave a hygroscopic solid, m. 58-9°, apparently the anhydride of isobutylsulfuric acid, which on heating with benzene failed to react even at 160°; heating with C_6H_6 to 165° gave much SO_3 and a substance, b. 200-50°. *$PrOSO_2Cl$*, b. 48°, b_{11} 50°, n_D^{20} 1.4340, d_4^{20} 1.2714, decomp. 80°. (30 g.) and 40 g. C_6H_6 let stand overnight, then heated on a steam bath until HCl evolution stopped, gave, after treatment with H_2O and steam distn., 4 g. propylphenol, b. 195-205° (from the aq. layer), and 5 g. of a fraction with b. p. close to that of PrPh (no data given); heating 30 g. $PrOSO_2Cl$ and 32 g. C_6H_6 2-3 hrs. on a steam bath gave 10% PhPr fraction; 62 g. $PrOSO_2Cl$ and 93 g. C_6H_6 after 18 hrs. on a steam bath gave 21% mixed propylbenzenes, b. 150-65°, n_D^{20} 1.4905. *iso-$PrOSO_2Cl$*, b. 50° (decompn.), and C_6H_6 gave only a small amt. of alkylated products. *$BuOSO_2Cl$*, b. 57°, n_D^{20} 1.4235, d_4^{20} 1.0077, decomp. 124° (35 g.) and 16 g. C_6H_6 on heating gave 5 g. mixed butylbenzenes. *iso-$BuOSO_2Cl$*, b. 45-7°, n_D^{20} 1.4241, d_4^{20} 1.2245, decomp. 72°, (25 g.) and 22 g. C_6H_6 heated 1 hr. on a steam bath gave 35.5% mixed butylbenzenes, b. 160-80°, and 7.5% dibutylbenzene, m. 75°; heating 38 g. of the Cl deriv. and 20 g. C_6H_6 to 80° gave 8 g. mixed butylbenzenes, b. 160-200°, while evapn. of the aq. soln. gave mixed solids, m. 52° and 98°, apparently $PhSO_3H$ and iso-$BuOSO_3$. *iso-$AmOSO_2Cl$*, b_{18} 83° (decompn.), n_D^{20} 1.4281, and *sec-$AmOSO_2Cl$*, b_{18} 43° (decompn.), n_D^{20} 1.4350, were also prepd. Heating $PrOSO_2Cl$ to 80° yields HCl, SO_2, and some satd. hydrocarbons, while treatment of the residue with H_2O and neutralization with $PbCO_3$ gave an insol. Pb salt, which with H_2S gave 2-

Lab. Organic Chem., Cent. Asian State U., Tashkent

USSR/Chemistry - Sulfuric Acid, Esters Mar 1948
(Acid), Condensation of
Chemistry - Chlorosulfonic Acid, Esters of

"Condensation of Acid Esters of Sulfuric Acid and Esters of Chlorosulfonic Acid With Benzene," Z. N. Nazarova, I. P. Tsukervanik, Lab Org Chem, Cen Asiatic State U, 7½ pp

"Zhur Obshch Khim" Vol XVIII (LXIX), No 3, p. 430-7

Studies of interaction of individual acid esters of sulfuric acid and benzene, showed an absence of alkylization process. Studies of reaction of thermal decomposition and hydrolysis of alkylchlorsulfonates. Submitted 11 Feb 1947.

[redacted]

69T17

NAZAROVA, Z.N., dotsent, kandidat khimicheskikh nauk.

Alkylation of aromatic compounds by the Friedel-Crafts reaction. (MLRA 9:5)
Biul.SAGU no.26:59-68 '49.
(Alkylation) (Aromatic compounds) (Friedel-crafts reaction)

NAZAROVA, Z. N.

USSR

Synthesis of 5-bromofurfural. Z. N. Nazarova. Dok-lady Akad. Nauk SSSR. 1954. Referat. Zhur., Khim. 1954, No. 38483.—Furfural was directly bro-minated in a soln. of CCl_4, C_6H_6, or C_6H_5Cl. Bromination of carefully purified and dried furfural without using excess Br yielded 5-bromofurfural. Addn. of S and hydroquinone raised the yield in C_6H_6 from 32 to 49%, and in C_6H_5Cl from 38 to 60.44%. To furfural dissolved in 4 times its vol. of C_6H_5Cl is added 0.01% each S and hydroquinone, the mixt. heated, an equimolar quantity of Br dissolved in 2 times its vol. of C_6H_5Cl added dropwise, the mixt. heated until evolution of HBr ceased and steam distilled to obtain 5-bromofurfural, m. 84° (from 60% alc.) (oxime, m. 101°). 15 refs.

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WS

NAZAROVA, Z. N.

USSR/Chemistry - Solvents

Card 1/1 : Pub. 151 - 36/37

Authors : Nazarova, Z. N.

Title : Beta-nitrovinyl-5-substituted furans

Periodical : Zhur. ob. khim. 24/3, 575-578, Mar 1954

Abstract : The products derived from the condensation of 5-bromo- and 5-nitrofurfuroles with nitromethane and chloronitromethane are listed. It was found that bromination and nitration of furylnitroethylene and furylchloronitroethylene result in the displacement of the alpha-hydrogen of the furan ring and the formation of 5-bromo- and 5-nitro derivatives. 5-Bromo-(beta-nitrovinyl)-furans subjected to reaction with nitric acid convert into homologous 5-nitro derivatives with the separation of the free bromine. Ten references: 6-USSR; 1-USA; 1-French and 2-German (1875-1953).

Institution : Central Asiatic State University

Submitted : July 13, 1953

NAZAROVA, Z.N.

USSR

5-Substituted 2-(2-nitrovinyl)furans. Z. N. Nazarova. J. Gen. Chem. U.S.S.R. 24, 689-92(1954)(Engl. translation). —See C.A. 49, 621(e). H. L. H.

MAZAROVA, Z.N.

Synthesis of iodine derivatives of the furan series. 5-iodo-furfurole. Zhur.ob.khim. 25 no.3:539-544 Mr '55 (MLRA 8:6)

1. Rostovskiy Gosudarstvennyy universitet.
(Iodine)(Furaldehyde)

NAZAROVA, Z.N.

Some properties of 5-halofurfurals. Z. N. Nazarova (State Univ., Rostov-on-Don). *Zhur. Obshchei Khim.* 27, 2012-14(1957).—The following derivs. of 5-halofurfurals are reported: *5-iodofurfural thiosemicarbazone*, m. 162–3°, decomp. 165°; *5-Br analog*, decomp. 106–7°; *furfural thiosemicarbazone*, m. 152–4°, decomp. 180°; *5-bromofurfural 2,4-dinitrophenylhydrazone*, m. 204–5°; *5-iodo analog*, m. 210–11°; *5-iodofurfural NaHSO₃ adduct*, m. 220°; *5-Br analog*, plates. Soly.: 5-Bromofurfural, in H_2O, 20°, 0.5, g./100 ml.; 100°, 2.5; in EtOH, 20°, 5.0; 78°, 120.0; in $(CH_2Cl)_2$, 20°, 3.7; 83°, over 360.0. 5-Iodofurfural, resp., 0°, 0.5; 3.0°, 40.0; 10.0°, over 360.0. G. M. K.

NAZAROVA, Z.N.; PIMENOVA, M.I.

5-haloidfurylacrylic acids and their derivatives. Zhur.ob.khim. 27 no.10:2842-2845 O '57. (MIRA 11:4)

1.Rostovskiy na Donu gosudarstvennyy universitet.
(Acrylic acid)

AUTHOR: Nazarova, Z. N.

TITLE: The Condensations of the furfurol 5-halides with ketylketones. I. Condensation with acetone (Kondensatsii 5-gal...furfurolov s metilketonami. I. Kondensatsiya s atsetonom).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 2971-2975 (USSR).

ABSTRACT: The condensation of the furfurols with acetone was for the first time carried out in an alkaline medium (according to Schmidt). But the condensation-products, mono- and difurfurylidene acetones in a pure state, were for the first time separated by Claisen (Klyayzen) and A. P. Ponder. It was found that in an alkaline medium, according to the interaction of the components, furfurylidene diacetone forms as well. The experiment showed that the condensation of the furfurol 5-halides with acetone is only possible in an alkaline medium (independent of the interactions of the initial components). The condensation of the furfurol 5-halides with acetone yielded ...-, ...-, unsaturated ketones of the furfurane series hitherto not yet described in publications and their 2,4-dinitrophenyl hydrazones. Very small concentrations of sulfuric acid were also determined at which specific colorings occurred for every di-(5-haloid furfurylidene)-acetone and 1-furfuryl-5-bromofuryl pentadiene-1-4-on-3.

Card 1/2

The Condensations of the Furfural [illegible] with Acetone. I. Condensation With Acetone.

There are 1 table, and 9 references, 4 of which are Slavic.

ASSOCIATION: Rostov-na-Donu State University (Rostov-na-Donu gosudarstvennyy universitet).

SUBMITTED: November 2, 1957.

AVAILABLE: Library of Congress.

1. Furfural 5-halides-Condensation reactions 2. Acetone-Condensation reactions

Card 2/2

AUTHORS: Nazarova, Z. N., [illegible]

TITLE: 5-Chlorofurfurylnitroolefins (5-Khlorfurilnitroolefiny)

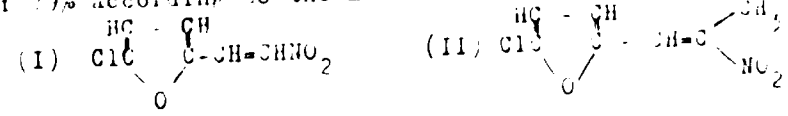
PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1503-1505 (USSR)

ABSTRACT: Nazarova showed earlier that the halogen furfurales containing bromine and iodine in position 5 of the furfuran nucleus can easily enter condensation with nitroparaffins. The present paper is the continuation of these investigations. It deals with the condensation products of 5-chlorofurfurole with nitroparaffins, which has hitherto not been carried out in spite of many similar condensations. In the last years a great number of papers and patents recommending the nitroolefins of the aromatic and furfuran series as insecticides (Ref 4) were published. As the introduction of a halogen atom to the furfuran nucleus stabilizes the latter and increases its bactericide effect, it was to be expected that the condensation investigated by the authors might be of practical interest. The condensation of 5-chlorofurfurole with nitromethane and nitroethane was carried out, with the

Card 1/3

5-Chlorofurfurylnitroolefins

method by Moldenhauer (Mol'dengauer) having been some... modified. It was possible to synthesize 5-chlorofurfuryl-nitroethylene (formula I) in a yield of 86%. The 5-chlorofurfurylnitropropene (II) was obtained in a yield of 70% according to the method described earlier [1]:

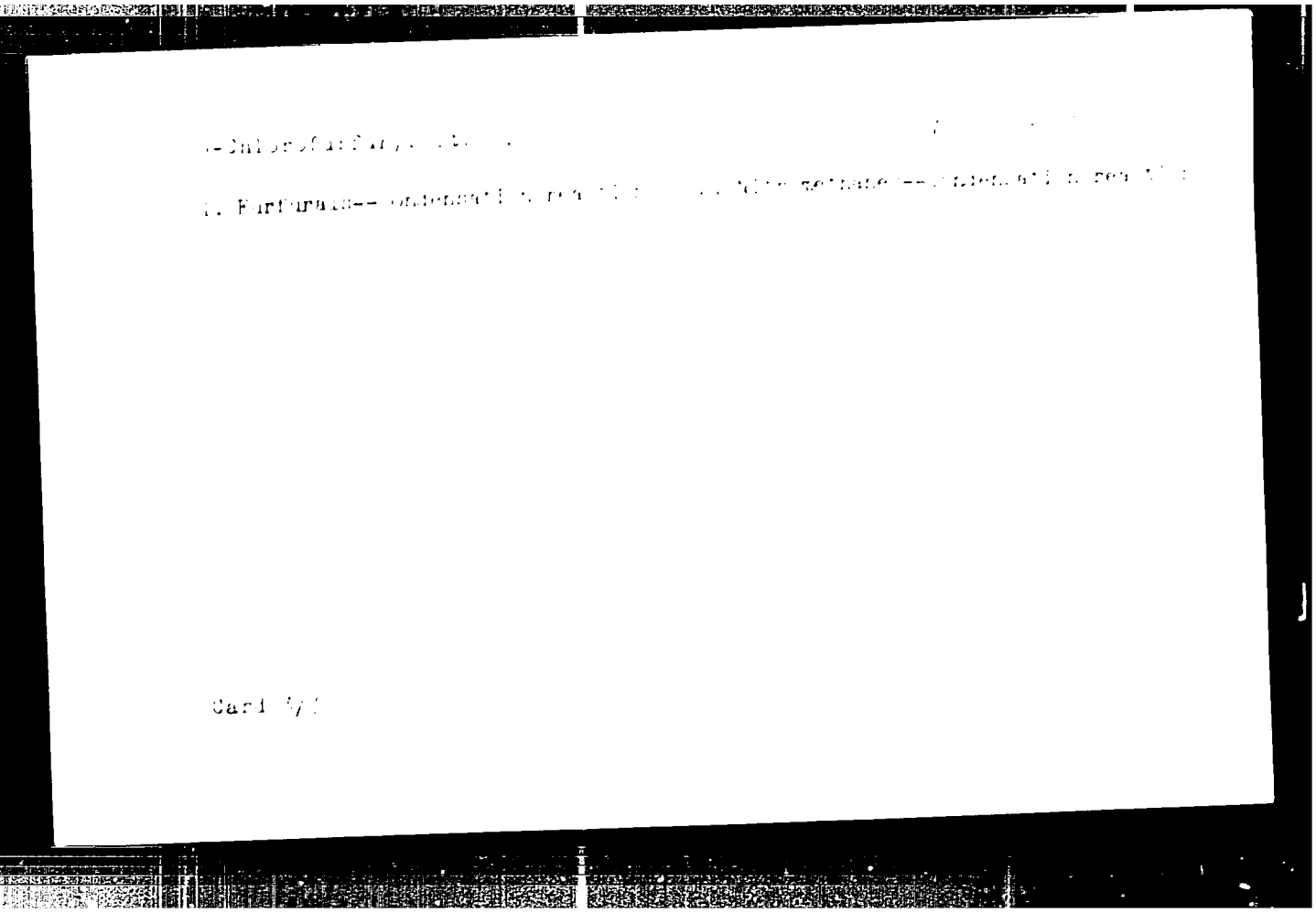


The 5-chlorofurfurylnitroolefins, recrystallized from alcohol, form light-yellow pins and can be solved only in organic solvents. There are 7 references, 4 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University)

SUBMITTED: June 11, 1...

Card 2/3

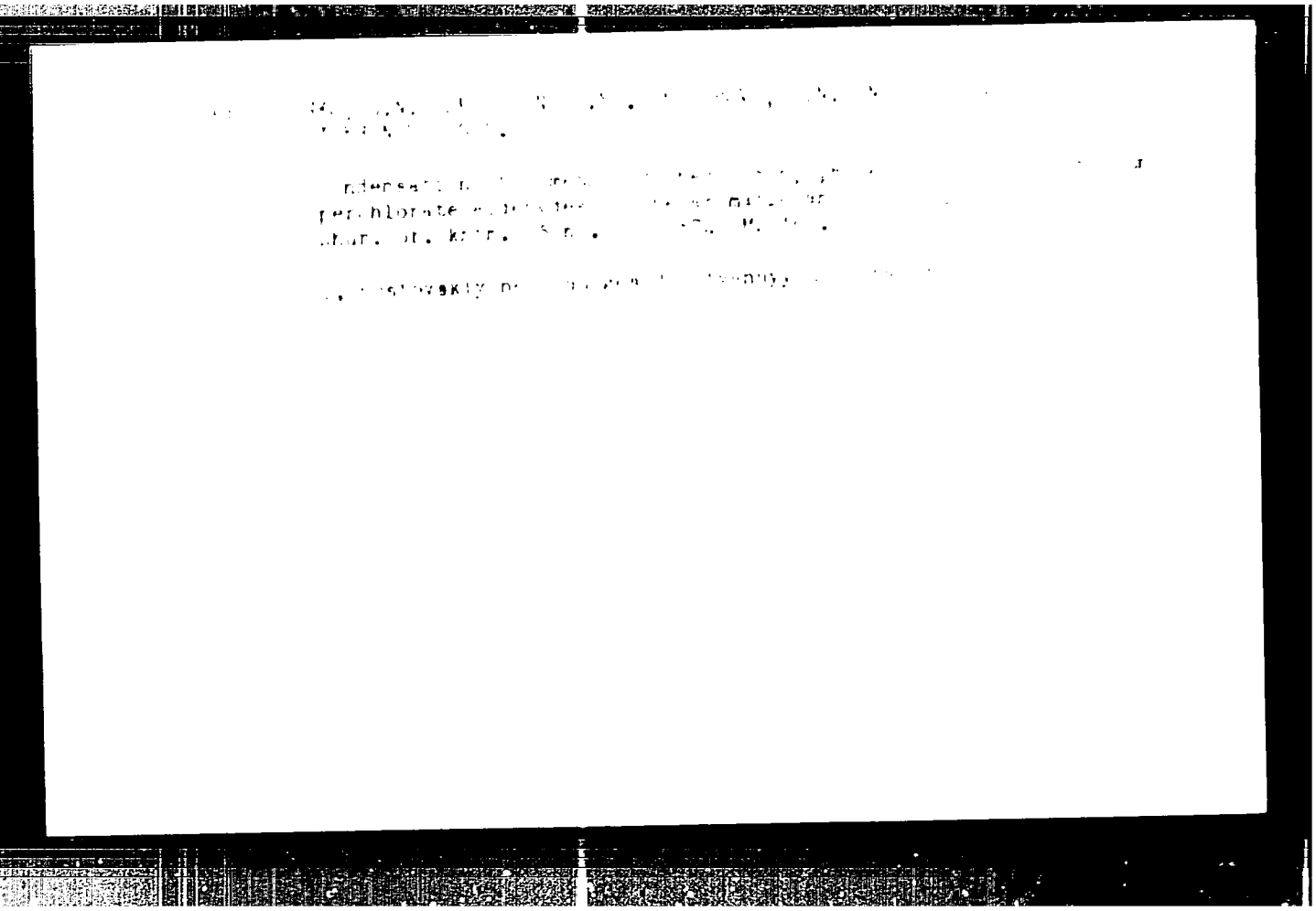


Card 1/1

NAZAROVA, Z.N.

Characteristics of the fusel oil, formed during the fermentation of cotton hull hydrolysates. Zhur.prikl.khim. 31 no.3:465-471 Mr '58. (MIRA 11:4)

(Cottonseed oil)



NAZAROVA, Z.N.; USTINENKO, T.V.

Synthesis of α,β-unsaturated ketones of the furan series and study of their conversions. Part 3: Condensation of 5-nitrofurfurole with methyl ketones. Zhur.ob.khim. 30 no.6:2017-2021 Je '60. (MIRA 13:6)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Ketones) (Furaldehyde)

GAKH, I.G.; NAZAROVA, Z.N.

Some new derivatives of thiourea. Zhur.ob.khim. 30 no.7:2183-2186 Jl '60. (MIRA 13:7)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Urea)

MAZAROVA, Z.M.; GAKH, I.G.

Some derivatives of 5-halofurancarboxylic acids. Zhur.ob. khim. 30 no.7:2322-2326 Jl '60. (MIRA 13:7)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Furoic acid)

NAZAROVA, Z.N.; CHUPRUNOVA, O.A.

Chemistry of 5-halofurans. Part 13: Reactions between 5-halofurfuroles and metal thiocyanates. Zhur. ob. khim. 30 no.9:2825-2829 S '60.
(MIRA 13:9)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Furaldehyde) (Thiocyanates)

NAZAROVA, Z.N.; NIVOROZHKIN, L.Ye.

Chemistry of 5-halofurans. Part 14. Reactions of 5-halofuryl nitroethylenes with metal thiocyanates. Zhur.ob.khim. 30 no.10: 3297-3299 O '61. (MIRA 14:4)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Thiocyanates) (Furan)

NAZAROVA, Z.N.; NOVIKOV, V.N.

Chemistry of 5-halofurans. Part 15: Reaction of the substitution of the halogen in 5-halo-2-nitrofurans. Zhur. ob. khim. 31 no.1: 263-267 Ja '61. (MIRA 14:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Furan)

KOVALENKO, K.N.; MINKIN, V.I.; NAZAROVA, Z.N.; KAZACHENKO, D.V.

Dipole moments of some derivatives of furfurole. Zhur.ob. khim. 32 no.2:549-553 F '62. (MIRA 15:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Furaldehyde--Dipole moments)

NAZAROVA, Z.N.; BABAYEV, Yu.A.

Chemistry of 5-halofurans. Part 16: Synthesis of 5-chlorofurfurole and some of its derivatives. Zhur.ob.khim. 32 no.3:723-725 Mr '62. (MIRA 15:3)

(Furaldehyde)