

SOV/122-58-12-10/32
Improving Forging Hammer Rods by Roller Working their Surface

a state of surface compression, but the spherical roller gives a slightly wavy surface. The second pass, therefore, is made with a roller with a cylindrical profile about 4 mm wide under about 700 kg load. This pass is made with the roller having an angle of attack which 'leads' by 6 - 8° in the direction of feed traverse (Fig 3). This gives a smooth surface. With original irregularities (with ground rods from steel of 255 - 302 Brinell hardness) amounting to 2.5 microns, rolling can produce surfaces with 1.5 micron irregularity using 700 kg load, and 0.7 to 1.0 micron using 1000 kg roller loading. On the second traverse the pressure is built up gradually as the roller traverses the rod. A table is given showing improvements amounting to 50 - 100% on service life for hammer rods for hammers with total weight from 1000 to 7200 kg, as a result of roll working their surface. There are 5 figures and 1 table.

Card 2/2

S/129/60/000/011/007/016
E073/E535

Heat Treatment of Magnesium Inoculated Cast Iron Crankshafts

of the obtained results, a heat treatment schedule was worked out, by means of which a structure of granular pearlite (Fig.1, plate) with a hardness of $H_B = 207-241$ was obtained. In addition to granular pearlite, islands of lamellar or sorbite-like pearlite were observed and also rejections of primary and secondary cementite. The subsequent experiments were made on 70 mm dia., 700 mm long specimens from twelve different heats (Table 3) produced in a 100 kg capacity high frequency furnace. On the basis of the results of these experiments, the following conclusions are arrived at:

- 1) For manufacturing cast crankshafts for motor-car engines, a magnesium inoculated cast iron of the following composition is recommended: 3.40-3.60% C, initial, 2-2.20% Si, 1.15-1.30% Mn, max 0.005% S, max 0.120% P, 0.15-0.25% Cr, 0.03-0.06% Mg.
- 2) To obtain granular pearlite the cast crankshafts have to be heat treated in accordance with the following regime: air hardening (normalization) by holding for 8 hours at $950 \pm 10^\circ\text{C}$, cooling with a speed of 60 to 30 deg/min down to 600°C , followed by tempering at

Card 2/3

S/129/60/000/011/007/016
E073/E535

Heat Treatment of Magnesium Inoculated Cast Iron Crankshafts
725⁺¹⁵°C with a holding time of 8 hours with subsequent cooling in
air.

3) Practical experience obtained with crankshafts made of this
material has confirmed that these are fully capable of replacing
satisfactorily forged crankshafts.
There are 5 figures and 3 tables.

ASSOCIATION: Gor'kovskiy avtomobil'nyy zavod (Gor'kiy Automobile
Works) ✓

Card 3/3

23101

S/122/60/000/011/018/020
A161/A127

Strengthening eccentric and stepped shafts

$$E_n = \frac{P_1 + P_2}{2} = \left(P_1 - \frac{x}{2} c \right) x \quad (1)$$

where P_1 is the spring effort in triggered position; P_2 - the spring effort in position at the moment when the striker contacts the work surface; x - work travel of the stiker; c - rigidity of the spring. If the optimum E_n is found experimentally for the fillet radius R , the stroke energy for the other fillet radii can be calculated from the deformation law of specimens under strokes of a ball. The work A absorbed by the specimen is directly proportional to the cube of the ball diameter, and, on the other side, work A is proportional with energy E_n :

$$E_n = k_1 D^3, \text{ or } E_n = k_2 R^3 \quad (2)$$

where R is the striker radius, and k_2 the coefficient of proportionality that can be calculated from the optimum data of the coining process. The obtained dependence (2) is used for calculating the stroke energy for any fillet radius. For convenience, a nomogram can be built up using the formulae (1) and (2) and the results of the spring calibration. Such a nomogram is shown (Figure 1), built

Card 2/4

SVESHNIKOV, D.A.; KOZYAKOV, N. Ya.; GOLUBOVSKAYA, L.D.; ZHIGUN, A.P.

Scale removal from the driven gear of "Volga" automobile transmissions.
Avt.prom. 27 no.6:42-43 Je '61. (MIRA 14:6)

(Automobiles--Maintenance and repair)

(Automobiles--Transmission device)

18.9100 (2808)

26388
S/032/61/027/008/011/020
B103/B206

AUTHORS: Kotkis, M. A., Sveshnikov, D. A., and Afanas'yeva, V. K.

TITLE: Investigation of the surface of fatigue failures by
electron microscope

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 8, 1961, 992

TEXT: The authors studied the surface structure of fatigue failures of brand-45 steel (C = 0.49%, Si = 0.17%, Mn = 0.77%, S = 0.035%, P = 0.025%) under the electron microscope. The steel was in its normal state ($\sigma_B = 67 \text{ kg/mm}^2$, $\sigma_S = 35.8 \text{ kg/mm}^2$, $\delta = 22.4\%$, $\psi = 45.3\%$). The specimens had a length of 450 mm and a diameter of 80 mm. They had a 2 mm deep annular kerf with a radius $R = 4 \text{ mm}$. To produce replicas, zapon varnish (1% solution of celluloid in amyl acetate) was applied twice to the fracture surface close to the start of the fatigue destruction. The replicas were separated by means of gelatin and shaded by means of chromium. The microphotographs of the fracture surfaces were evaluated according to the classification by D. N. Vidman (Vestnik mashinostroyeniya, No. 2 - 4

Card 1/3

S/129/63/000/001/001/017
E073/E535

AUTHORS: Kudryavtsev, I.V., Doctor of Technical Sciences,
Professor and Sveshnikov, D.A., Engineer

TITLE: Heating of work-hardened components to improve their
fatigue strength

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
no.1, 1963, 5-7

TEXT: The effect on fatigue strength of additional heating
after work hardening was investigated. The specimens were first
heat treated (holding at 900°C for 60 min, quenching in oil,
tempering for 60 min at 450°C in a nitrate bath), then work-
hardened by shot-peening and subsequently tempered at various
temperatures. The following tests were carried out: bending of
flat, 6 mm thick specimens of the spring steel 55C 2 (55S2);
symmetrical torsion of 8 mm diameter rods of the steel 60C 2
(60S2); fatigue tests on coiled springs made of 41 mm diameter
wire of the steel C65A (S65A). Results: the fatigue limit of
work-hardened springs can be increased by 9-10% by subsequent
heating. The optimum temperature for which the highest increase

Card 1/2

SVESHNIKOV, D.A.

Hardening gearbox pinions of automobiles by shot peening. Avt.prom.
30 no.2:35-38 F '64. (MIRA 17:4)

1. Gor'kovskiy avtomobil'nyy zavod.

SVESHNIKOV, D.S.

Increasing the fatigue strength of cemented and cyanided
parts by shot peening. Metalloved. 1 term. obr. mat.
no. 47-49 Ap '64. (MIRA 17:6)

1. Ger'kovskiy avtomobil'nyy zavod.

L 11793-66

ACC NR: AT6000063

(55S2 steel) specimens, 6.0 mm thick, were prepared for shear tests, and circular K-3 (60S2 steel) specimens, 8.0 mm in diameter for symmetrical torsion testing. The thermal treatment applied consisted of 60-minute tempering at 900C, quenching in oil, and a 60-minute nitrate bath at 450C. Results indicate that with increasing temperature of cold-worked specimens their fatigue limit increases, reaching a maximum shear strength at 300C, and a maximum torsional strength at 200C. In both cases the heat treatment results in a 10% strength increase, and further temperature increases cause the strength limits to drop sharply. Additional fatigue tests were performed on the valve lift springs used on the Pobeda automobile. The results are plotted and show that a maximum fatigue strength is reached with a secondary heat treatment at 1750. Testing was performed according to the method of L. Locati (La Metallurgia Italiana, 1955, No. 9). A discussion of the relative importance of size, shape, and density of the materials tested is given. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 24Apr65/ ORIG REF: 008/ OTH REF: 003

HW
Card 2/2

ACC NR: AP7003847

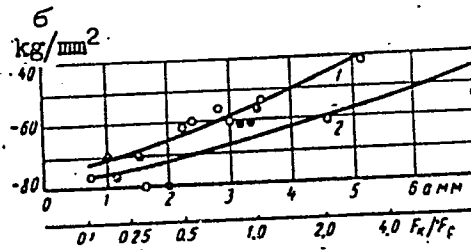


Fig. 1. Residual stresses in the surface layer of rings (at depth of 0.1 mm) versus depth of hardened layer and ratio F_k/F_c :
1 - HRC 55; 2 - HRC 45

compressive stresses which increase the fatigue strength and durability of case-hardened and tempered parts. Engineers L. D. Golubovskaya and A. I. Bad'in took part in the work. Orig. art. has: 5 graphs.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002

Card 2/2

SVESHNIKOV, G.B.

Ferromagnetic properties of minerals. Vestnik Leningrad. Univ. 5, No.7,
83-7 '50. (MIRA 3:11)
(GA 47 no.22:11833 '53)

SVESHNIKOV, G.B., Cand Geol-Min Sci--(diss) "Hydrochemical aureoles
of ^{the} diffusion of heavy metals in the polymetallic deposits of Rudnoy
Alty." Len, 1958. 19 pp (Len Order of Lenin State U in A.A. Zhdanov),
125 copies (IL, 22-58, 105)

-46-

SVESHNIKOV, G.B.

Electrode potentials of minerals and their role in dissolving sulfide
ores. Uch. zap. LGU no. 249:278-295 '58. (MIRA 11:5)
(Sulfides--Electrometallurgy)

STASHINSKY, G.B.

Oxidation-reduction potentials of waters in the Rudnyy Altai complex
metal deposits. Vest. LGU 14 no. 12:59-67 '59. (MIRA 12:7)
(Altai Mountains--Mine water)

SVESHNIKOV, G.B.; DOROFYEVA, M.K.

Certain electrochemical characteristics of sulfide minerals.
Uch. zap. IGU no.278:149-153 '59. (MIRA 13:2)
(Pyrites--Electric properties)
(Galena--Electric properties)

SVESHNIKOV, G.B.

Effect of electrochemical solution of sulfides on the chemical composition of waters in polymetallic deposits of the Rudnyy Altai. Uch. zap. LUG no.286:130-141 '60. (MIRA 14:3)
(Altai Mountains--Geochemical prospecting)
(Water, Underground)

SVESHNIKOV, G.B.; DOBYCHIN, S.L.; SHKORBATOV, S.S.

Possible role of electrochemical solution of sulfides in the
formation of aqueous halos of nickel dispersion. Uch. zap. LGU
no.286:142-148 '60. (MIRA 14:3)

(Geochemical prospecting)
(Nickel ores)

S/169/62/000/005/037/093
D228/D307

AUTHOR: Sveshnikov, G. B.

TITLE: Factors governing the formation of a natural electric field in sulfide deposits

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 34-35, abstract 5A268 (V sb. Vopr. rudn. geofiz., no. 2, M., Gosgeoltekhizdat, 1961, 68-78)

TEXT: It is stated that the main cause of the formation of a natural electric field in ore deposits is the difference in the potential jumps at the boundary of the electron conductors, which constitute the orebody, with the ionic medium, represented by inun- dated rocks. The potential jump at the orebody's boundary is determined by the ore's electrode potential, which depends on a whole series of factors (chemical composition of the minerals and the solutions, the pH value of the waters, etc.). It is emphasized that the influence of these factors is assessed differently by various authors. The work of a number of research scientists is con- ✓

Card 1/2

41160

S/169/62/000/009/054/120
D228/D307

3.9490*

AUTHOR: Sveshnikov, G. B.

TITLE: Role of the chemical composition of subsurface waters in the formation of a natural electric field in sulfide deposits

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 41, abstract 9A272 (In collection: Vopr. rudn. geofiz., no. 3, M., Gosgeoltekhizdat, 1961, 22-29)

TEXT: One of the chief factors, determining the natural electric field's intensity in sulfide deposits, is the variable chemical composition of waters circulating at different depths. The concentration of hydrogen ions (pH value) and also of ions of redox systems -- for example, Fe^{2+} and Fe^{3+} -- plays the main part. In the event of the influence of one of these factors -- for example, the pH value -- it is possible to estimate quantitatively the natural field's emf. The sharpest differences in the chemical composition

Card 1/2

SVESHNIKOV, G.B.; SHEN' CHZHAO-LI [Shên Chao-li]

Hydrochemical studies in the ore-bearing region of the Irtysh Valley.
Uch.zap.IGU no.303:301-319 '62. (MIRA 15:11)
(Irtysh Valley—Water, Underground—Analysis)
(Geochemical prospecting)

SVESHNIKOV, G.B.; SHEN' CHZHAO-LI [Shên Chao-li]; SMIRNOVA, F.F.

Effect of annual changes in the climatic conditions on the nature
of hydrochemical anomalies in the Rudnyy Altai. Uch.zap.IGU
no.303:320-333 '62. (MIRA 15:11)
(Altai Mountains--Water, Underground--Analysis)
(Geochemical prospecting)

SVESHNIKOV, G.B.; KEDRINSKIY, I.A.

Electrochemical solution of sulfide ores. Vest. LGU 18 no.12:
62-71 '63. (MIRA 16:8)

(Sulfides) (Electrochemistry)

SVESHNIKOV, G.B.; RYSS, Yu.S.; AUZIN, A.K.

Natural electric field as a factor in the formation of zones of
secondary enrichment in sulfide deposits. Uch. zap. LGU no.320:
122-133 '63. (MIRA 16:9)

(Electric prospecting) (Sulfides)

LEBEDEV, V.I.; SVESHNIKOV, G.B.

American scientist at Leningrad University. Vest. LGU 19 no.12:
177-178 '64 (MIRA 17:8)

RYSS, Yu.S.; SVESHNIKOV, G.B.

Geoelectrochemical processes in geological phenomena. Vest.
IGH 19 no.18:49-56 '64. (MIRA 17:11)

SVESHNIKOV, G.B.; IL'IN, Yu.T.

Stationary electrode potentials of ore deposits. Uch. zap. LGU
no. 324:317-332 '64. (MIRA 18:4)

SVESHNIKOV, G. N.
USSR/ Scientists - Obituary

Card 1/1 : Pub. 41-1/18

Author : Kochina, P. Ya., Blokh, E. L., Kosmodem'yanskiy, A. A., Rabotnov, Yu. N.,
Sveshnikov, G. N., Talitskikh, N. A., Finikov, S. P., and Chetayev, N. G.

Title : To the memory of Vladimir Vasil'yevich Golubev

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 12, 3-4, Dec 1954

Abstract : A brief review of the life of the recently deceased Golubev.

Institution :

Submitted :

VORONKOV, I.M., prof.; GERNET, M.M., prof.; DOBRONRAVOV, V.V., prof.;
KOSMODEM'YANSKIY, A.A., prof.; LOYTSYANSKIY, L.G., prof.;
SVESHNIKOV, G.N., prof.; SLOBODYANSKIY, M.G., prof.; YABLONSKIY,
A.A., prof.; POGOSOV, G.S., dotsent

[Program in theoretical mechanics for majors in machinery
designing, mechanics, instrument designing, electrical engi-
neering, and construction at advanced technical institutions
(220 hours)] Programma po teoreticheskoi mekhanike dlia mashino-
stroitel'nykh, mekhanicheskikh, priborostroitel'nykh, elektro-
tekhnicheskikh i stroitel'nykh spetsial'nostei vysshikh tekhnicheskikh
uchebnykh zavedeni (220 chasov). Moskva, Gos.izd-vo
"Vysshaya shkola," 1959. 10 p. (MIRA 13:2)

1. Russia (1923- U.S.S.R.) Ministerstvo vysshego obrazovaniya.
(Mechanics, Analytical)

SVESHNIKOV, G.N.; GOL'DBERG, G.M., kand. tekhn. nauk; SHAKHIDZHANOVA, V.I.,
starshiy prepodavatel'; SHAFALOVICH, A.F., red.; CHISTYAKOVA,
E.P., tekhn. red.

[Geometrial statics; lecture abstract] Geometricheskaya
statika; konspekt lektsii. Sost. G.M. Gol'dberg i V.I. Shakhidzhanova.
Moskva, Mosk. aviatsionnyi in-t im. Sergo Ordzhonikidze, 1959.
78 p. (MIRA 14:4)

(Statics)

ZINOV'YEV, V.A.; SVESHNIKOV, G.N.; SNITKO, I.K.; YAKOVLEV, K.P., red.;
RYDNIK, V.I., red.; AKHLAMOV, S.N., tekhn.red.

[Short handbook on physics and mechanics] Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Gos.izd-vo fiziko-matem.
lit-ry. Vol.2. [General mechanics, strength of materials,
theory of mechanisms and machines] Obshchaya mekhanika, sopro-
tivlenie materialov, teoriya mekhanizmov i mashin. 1960. 411 p.
(MIRA 13:12)

(Mechanics) (Strength of materials) (Machinery)

ZINOV'YEV, V.A.; SVESHNIKOV, G.N.; SNITKO, I.K.; YAKOVLEV, K.P.,
red.; RYDNIK, V.I., red.; KOLESNIKOVA, A.P., tekhn. red.

[Concise physical and technological handbook]Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Fizmatgiz. Vol.2.[General
mechanics, strength of materials, theory of mechanisms and
machinery]Obshchaia mekhanika, soprotivlenie materialov, teoriia
mekhanizmov i mashin. 1962. 417 p. (MIRA 15:12)
(Mechanics) (Strength of materials) (Mechanical engineering)

GERNET, Mikhail Mikhaylovich, prof.; SVESHNIKOV, G.N., zasl.
deyatel' nauki prof., retsenzent; VESELOVSKIY, I.N.,
doktor fiz.-mat. nauk, prof., retsenzent; POGOSOV, G.S.,
kand. fiz.-matem. nauk, dots., nauchn. red.

[Course in theoretical mechanics] Kurs teoreticheskoi me-
khaniki. Moskva, Vysshaya shkola, 1965. 406 p.

(MIRA 18:7)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. N.Ye.
Baumana (for Veselovskiy).

SVESHNIKOV, G.V.; DOBYCHIN, S.L.

Galvanic sulfide dissolution as a formation cause of the hydrogeochemical halo of heavy metal dissemination [with English summary in insert]. Geokhimiia no.4:70-75, '56. (MLRA 9:11)

1. Leningradskiy gosudarstvennyy universitet, Leningradskiy tekhnologicheskii institut.
(Sulfides) (Altai Mountains--Geochemistry)

KOZLOV, V.Sh.; SVESHNIKOV, G.V.

Experimental construction of a building from machine-cast
elements. Prom.stroi. 39 no.8:35-40 '61. (MIRA 14:9)
(Kiev--Precast concrete construction)

LIBERMAN, A.D., kand.tekhn.nauk; KOZLOV, V.Sh., inzh.; SVESHNIKOV, G.V.,
inzh.

Design and construction of a mechanically assembled building for an
automatic machine-tool plant. Prom. stroi. 39 no.10:42-47 0
'61. (MIRA 14:10)

1. Nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy
Akademii stroitel'stva i arkhitektury USSR (for Liberman).
2. Kiyevskiy Promstroyproyekt (for Kozlov). 3. Kiyevskiy sovnar-
khoz (for Sveshnikov).
(Kiev--Precast concrete construction)

61115-65 EWT(m)/EWG(s)-2

ACCESSION NR: AP5019106

JR/0286/65/000/012/0127/0127

AUTHORS: Yurchenko, A. G.; Shevchuk, F. Ye.; Syeshnikov, G. V.; Veselovskiy, V. N.; El'gort, R. Ye.

TITLE: A device for making cellular concrete. Class 80, No. 172208

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 127

TOPIC TAGS: construction material, concrete, cellular concrete

ABSTRACT: This Author Certificate presents a device for making cellular concrete (see Fig. 1 on the Enclosure). The device consists of a mixing container mounted on a horizontal hollow roller and carrying an internal endless worm screw. To intensify the degree of concrete mixing, the mixing container is produced in the form of a cylindrical grill made up of hollow panels with perforated walls. These panels are mounted on the roller. Orig. art. has:

CLASSIFICATION

CONTROL NO.

CLASS

SEC CODE: 41115

NO. OF PAGES: 100

REF: 100

Card 1/2

L 61115-65

ACCESSION NR: AP-11106

ENCLOSURE: 01

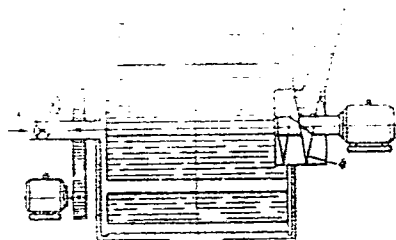


Fig. 1. 1- mixing container; 2- hollow roller;
3- hollow disk; 4- worm screw; 5- hollow panels
with openings

Card 2/2

SVECHNIKOV, I. (Docent)

"Production Workers Prepare to Enter Higher Educational Institutions, -
Courses for Construction Workers," Vechernyaya Moskva, 7 June 1957, p. 1.

Director, Moscow Inst. of City Construction Engineers

Trans - U-3,055,385

SVESHNIKOV, I.

Automatic washing machine. Zhil.-kom. khoz. 11 no.9:30 S '61.
(MIRA 14:11)

1. Nachal'nik proyektno-konstruktorskogo byuro Akademii
kommunal'nogo khozyaystva i direktor Eksperimental'nogo zavoda
Akademii kommunal'nogo khozyaystva.
(Washing machines)

SVESHNIKOV, I.A.

Excitation of synchronous motors with an electrolyzer system. From
energ. 15 no.10:25-27 0 '60. (MIRA 13:11)

(Electric motors; Synchronous)

SLESAREV, P.A., prof.; SVESHNIKOV, I.A., inzh.

Studying the physicommechanical properties of rocks. Izv. vys.
ucheb. zav.; gor. zhur. no.5:47-52 '61. (MIRA 16:7)

1. Khar'kovskiy gornyy institut. Rekomendovana kafedroy
stroitel'stva gornyykh predpriyatiy.
(Dnieper Basin--Rocks--Analysis)

SVESHCHIKOV, I.A.; SHATALINA, V.D.

Raising the performance efficiency of electrolyzers. Masl. -
zhir. prom. 27 no.12:33-36 D '61. (MIRA 14:12)

1. Predpriyatiye "Energotekhnaladka".
(Electrolysis)
(Oil industries--Equipment and supplies)

POLYAK, M.S.; SVESHNIKOV, I.A.

Increasing the durability of cable-tool drill bits by the
method of hard facing with new wear-resistant KhGI alloys.
Nauch. trudy KHGI 11:101-103 '62. (MIRA 16:11)

SVESHNIKOV, I.P.

DECEASED
c1960

1961/I

SEE ILC

SANITARY ENGINEERING

SOV/137-59-1-281

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 35 (USSR)

AUTHORS: Sveshnikov, M. A., Sobchuk, Yu. I., Vasil'yev, B. T.

TITLE: Placing Into Operation the First Fluidized-solids Furnace for the Roasting of Pyrite (Opyt puska pervoy pechi dlya obzhiga kolchedana v kipyashchem sloye)

PERIODICAL: V sb.: Vopr. polucheniya sernist. gaza iz kolchedana i sery. Leningrad, Goskhimizdat, 1957, pp 58-68

ABSTRACT: A furnace for roasting of pyrite by the fluidized-bed method was designed in 1953 and placed into operation in 1955 at the Voskresenskiy chemical plant. The furnace is designed for maximum utilization of heat of the fluidized layer (immersed coils) as well as of furnace gases (heat-recovery boilers). A diagram and a detailed description of the furnace and its associated equipment are presented. The furnace is rectangular in cross section (2.2x6x2.45 m) and is equipped with automatic controls for regulation of fuel and draft; the rated output of the furnace constitutes 90 tons of pyrite per day, the height of the fluidized-solids layer being 0.7 m. The roasting output attained amounted to 55 tons per day; the S content in cinders and in

Card 1/2

SUBSHNIKOV, I. A.

Bol'she mineral'nykh udobrenii (More mineral fertilizers). Moskva, "Mosk. rabochii,"
1954. 35 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 7, Oct. 1954

SVESHNIKOV, M.A.

USSR/ Chemical Technology. Chemical Products and Their
Application - General Questions

I-1

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12311

Author : Sveshnikov M.A., Andreychenko A.M.

Inst : Voskresensk Chemical Combine imeni V.V. Kuybyshev

Title : Twenty-Fifth Anniversary of the Voskresensk Chemical
Combine imeni V.V. Kuybyshev

Orig Pub : Khim. prom-st', 1956, No 5, 41-42

Abstract : No abstract.

Card 1/1

- 1 -

TSZEN LIN [TSông Ling]; KHAN' LEY [Han Lei]; GREBENNIKOVA, Ye. [translator];
NOVAK, L. [translator]; SVESHNIKOV, M.N., obshchiy red.; LOGO-
VINSKAYA, R., red.; TELEGINA, T., tekhn.red.

[Currency circulation in the Chinese People's Republic] Denezhnoe
obrashchenie Kitaiskoi Narodnoi Respubliki. Vstup.stat'ia i ob-
shchaia red. M.N.Sveshnikova. Moskva, Gosfinizdat, 1959. 182 p.
(MIRA 12:12)

(China--Money)

SVESHNIROV, M.

Legal certification of accounts in the State Bank. Den. i kred.
17 no.11:32-39 N '59. (MIRA 12:12)
(China--Economic conditions)

AYZENBERG, Isaak Petrovich, doktor ekonom. nauk; SVESHNIKOV, M., otv.
red.; NADEZHDINA, A., red. izd-va; LEBEDEV, A., tekhn. red.

[The new rate of exchange for the ruble] Novyi valiutnyi kurs
rublia. Moskva, Gosfinizdat, 1961. 76 p. (MIRA 14:10)
(Foreign exchange)

1st AND 2nd GROUPS 3rd AND 4th GROUPS

PROCESSES AND PROPERTIES INDEX

ea 10

Agils of 3-hydroxythionaphthene-2-aldehydes and their
vinylene homologs. I. I. Levkov and N. N. Sveshnikov.
Russ. 55,421, Aug. 31, 1939. 3-Hydroxythionaphthene
or its homologs are condensed in the presence of an inert
solvent with a compd. of the general formula ArN:CH-
(CR:CR')_nNHAr, where Ar is an aromatic radical, R
and R' are H, alkyl, halide, alkoxy- or acyloxy or a nitro
group, and n is 1 or 2.

COMMON ELEMENTS

COMMON VARIABLES INDEX

ASM-A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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2070-1, 1. 1.; 3171-100, 1. 1.; 1071-100, 1. 1.

"On Semi-methionic Pigments of the 3-Oxythionaphthene Series--II. On the Condensation of Acids of 3-oxythionaphthene-2-aldehyde and its Vinylene Homologue from Quaternary Salts of 2-methylbenzothiazole". Zhur. Obshch. Khim. 18, No. 7, 1940. Scientific-Research Cine-photo-Inst, Moscow, Dec 27 Oct 1939.

Report 6-1427, 11 Jan 52

117 AND 7TH COPIES PROCESSES AND PROPERTIES INDEX 140 AND 4TH COPIES

20

18

2-Nitro-4-methoxyphenol. I. I. Levkov, N. N. Sveshnikov, and N. S. Barbyn. U.S.S.R. 66,871, Aug. 31, 1960. 3-Nitro-4-aminoanisole or its acyl derivs. is heated with an aq. alkali soln. M. Hosh

ASM-31A METALLURGICAL LITERATURE CLASSIFICATION

GROUP #1 2ND AND 4TH COPIES REGISTER 117 AND 4TH COPIES

PROGRESSIVE AND PROPERTIES INDEX

10

Derivative of benzothiazole. II. Action of potassium ferrocyanide on thioacetyl-m-anisidine. N. N. Sveshnikov and I. I. Levkoev. *J. Gen. Chem. (U.S.S.R.)* 16, 1071-6 (1946) (in Russian); cf. Kiprianov and Klerpal, *C.A.* 38, 909'. -m-Anilidine (12.3 g.) suspended in 50 cc. H₂O was treated with 12.2 g. Ac₂O at 15-20° to give 91.5% *N*-acetyl-m-anisidine, m. 79-80°. This (3.3 g.) in 10 cc. boiling C₆H₆ was treated with 0.9 g. powd. P₂S₅ and boiled 20 min.; the C₆H₆ ext. of the gummy residue and the original soln. were combined and extd. with 4% NaOH; the ext. was neutralized with AcOH and treated with CO₂ to ppt. *N*-thioacetyl-m-anisidine (37.2%), m. 51.5-2° (from 25% EtOH). This (8.72 g.) in 145 cc. 4% NaOH was added at 3-5° to 36.5 g. K ferrocyanide in 165 cc. H₂O with stirring and allowed to stand overnight, to yield, after Et₂O extn. and treatment with picric acid, 77.5% picrates of mixed *o*-methoxy- (I) and 7-methoxy-3-methylbenzothiazole (II), m. 133-40°. Decompn. of the picrates with soda gave 6.61 g. of a crude base mixt. which, warmed with 2 cc. ligroin, cooled, and partially evapd., gave 37.3% (III), m. 56-7° (from ligroin); picrate m. 162-3° (from EtOH); methiodide m. 203-5° (from EtOH); ethiodide m. 181-3° (from EtOH); propiodide m. 191-3° (from EtOH). The mother liquor from the II was converted into the picrate, m. 141-3°, which after crystn. from EtOH m. 161-2° and gave, after treatment with soda, 7% I, m. 38.5 0° (from ligroin); picrate m. 102-3° (from EtOH); methiodide m. 224 0° (from EtOH); ethiodide m. 187-8° (from EtOH); Me *p*-toluenesulfonate m. 165-6° (from abs. EtOH). I was synthesized for identification purposes by an independent method as follows. 3-Nitro-4-bromoanisole (11.6 g.) in 20 cc. boiling EtOH was treated over 30 min. with a Na polysulfide soln. from 6 g. cryst. Na₂S and 1.2 g. S, and the mixt. boiled 3 hrs.; the sepd. oil was boiled with 10 cc. EtOH, then treated with Et₂O to induce crystn. of bis(*o*-methoxy-2-nitrophenyl) sulfide (38%), m. 161-3° (from C₆H₆) (a 2nd crystn. gave a m.p. of 166-7°). This (3.68 g.) and 6.87 g. Zn dust were mixed and slowly added to 30 cc. AcOH at 80-100°, heated at 100° 0.5 hr., treated with 6.12 g. Ac₂O, heated 3 hrs. at 114-17°, cooled to 70-80°, dild. with 50 cc. H₂O, heated to boiling, and filtered rapidly; the filtrate was made alk. and the oily I was extd. with Et₂O, which was then removed *in vacuo* after drying to give 83.7% of a product, m. 38.5-9° (from ligroin), identical with the product of ferrocyanide oxidation given above.
G. M. Kosolapoff

ASA-31A METALLURGICAL LITERATURE CLASSIFICATION

COMPONENT ELEMENTS

MATERIAL INDEX

RESEARCH AND DEVELOPMENT

PROGRESSIVE AND PROPERTIES INDEX

10

1ST AND 2ND CROSS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH CROSS

25

Cyanine dyes. II. Certain isomeric methoxythiacarbo-
cyanines. I. I. Levkov, N. N. Svrshnikov, and S. A.
 Khellets (Kino-foto Research Inst., Moscow). *J. Gen.*
Chem. (U.S.S.R.) 16, 1480-94(1946) (in Russian); cf.
C.A. 40, 2980¹.—Several 4,4', 5,5', 6,6', and 7,7'-
 dimethoxythiacarboyanines were synthesized, and their
 absorption was studied. Introduction of MeO groups in the
 5- and 6-positions produces an almost equal, consid-
 erable bathochromic effect, while substitution in the 4-
 and 7-positions shifts the absorption max. only slightly to
 longer wave lengths. This indicates that in the 4- and 7-
 and the 5- and 6-derivs. structures with positively charged
 N and those with positively charged S resonate with approx.
 equal weight. Thiocetyl-*o*-anisidine (27.1 g.) in 610 cc.
 4% NaOH was treated at 0-5° with 103 g. K ferriyanide
 in 400 cc. water; after standing overnight, the mixt. was
 extd. with Et₂O, and the ext. treated with alc. picric acid
 to yield 33.8% 4-methoxy-2-methylbenzothiazole picrate, m.
 161.5-2.5° (from EtOH), free base, m. 87-8° (from EtOH);
 methiodide, m. 208-9° (from MeOH), ethiodide, m. 185-6°
 (from EtOH); *n*-propiodide, m. 180-7° (decomp.; from
 EtOH), Et *p*-toluenesulfonate, m. 180-7° (from EtOH).
 The other isomers were prepd. similarly according to Jacob-
 son (*Ber.* 19, 1071(1880)). The corresponding 2-methyl-
 methoxybenzothiazoles were heated with a 5% excess of
 Et *p*-toluenesulfonate for 6 hrs. to 140-50° to prep. the
 3,3'-diethyldimethoxythiacarboyanine iodides; in the
 case of the dimethyl derivs. the heating was to 130-5°;
 the crude quaternary salts were treated with pyridine and
 the corresponding ortho ester (Et orthoformate, ortho-
 acetate, or orthopropionate) and heated to 130-5° for
 30-60 min. after which the dyes were isolated by pptn.
 with Et₂O, soln. in hot MeOH, and addn. of 5% aq. KI.
 After recrystn. they were dried *in vacuo* at 70-100°. The
 properties and yields of the products are: 3,3'-diethyl-
 4,4'-dimethoxythiacarboyanine iodide (62%), blue-violet
 needles, decomp. 241° (from MeOH), abs. max. 560 mμ;
 3,3'-diethyl-9-methyl-4,4'-dimethoxythiacarboyanine iodide
 (54%), brick-red needles, decomp. 224° (from MeOH),
 abs. max. 544 mμ; 3,3',9-triethyl-4,4'-dimethoxythiacarbo-
 cyanine iodide (40%), blue-green plates, decomp. 214°
 (from MeOH), abs. max. 548 mμ; 3,3'-dimethyl-9-ethyl-
 4,4'-dimethoxythiacarboyanine iodide (25.5%), red-brown
 needles, decomp. 200° (from MeOH), abs. max. 546 mμ;
 3,3'-diethyl-5,5'-dimethoxythiacarboyanine iodide (51%),
 blue needles, decomp. 244° (from EtOH), abs. max. 578
 mμ; 3,3'-diethyl-9-methyl-5,5'-dimethoxythiacarboyanine
 iodide (33%), deep violet needles, decomp. 230° (from
 MeOH), abs. max. 550 mμ; 3,3',9-triethyl-5,5'-dimethoxy-
 thiacarboyanine iodide (33%), green prisms, decomp.
 241° (from EtOH), abs. max. 561 mμ; 3,3'-dimethyl-9-
 ethyl-5,5'-dimethoxythiacarboyanine iodide (50%), brown-
 green needles, decomp. 227° (from MeOH), abs. max.
 558 mμ; 3,3'-diethyl-6,6'-dimethoxythiacarboyanine io-
 dide (76%), violet prisms, decomp. 270° (from MeOH),
 abs. max. 572 mμ; 3,3'-diethyl-9-methyl-6,6'-dimethoxy-

ASS-51A METALLURGICAL LITERATURE CLASSIFICATION

6-8 TYPED INDEX

1ST AND 2ND CROSS 3RD AND 4TH CROSS

thiacarboyanine iodide (36%), gray-green prisms, decomp. 267° (from MeOH), abs. max. 597 m μ ; *3,3',9-triethyl-6,6'-dimethoxythiacarboyanine iodide* (30%), deep blue prisms, decomp. 242° (from MeOH), abs. max. 563 m μ ; *3,3'-dimethyl-9-ethyl-6,6'-dimethoxythiacarboyanine iodide* (40%), brown-red prisms, decomp. 255° (from MeOH), abs. max. 560 m μ ; *3,3'-diethyl-7,7'-dimethoxythiacarboyanine iodide* (65%), blue-violet prisms, decomp. 260-70° (from MeOH), abs. max. 561 m μ ; *3,3'-diethyl-9-methyl-7,7'-dimethoxythiacarboyanine iodide* (30%), violet-red needles, decomp. 282° (from MeOH), abs. max. 540 m μ ; *3,3',9-triethyl-7,7'-dimethoxythiacarboyanine iodide* (30%), violet-green needles, decomp. 263° (from MeOH), abs. max. 548 m μ ; *3,3'-dimethyl-9-ethyl-7,7'-dimethoxythiacarboyanine iodide* (40%), red needles, decomp. 275° (from MeOH), abs. max. 540 m μ .

G. M. Kosolapoff

PROCESS AND PROPERTIES INDEX

ca

Cyanine dyes. III. Certain 4,5,4',5'-bis(tetramethylene)thiocarbocyanines. I. I. Lavkov and N. N. Sveshnikov (Kino-Foto Res. Inst., Moscow). *J. Gen. Chem.* (U.S.S.R.) 16, 1655-8(1946); cf. *C.A.* 41, 5300c.— Substitution of tetramethylene rings in place of 4,5,4',5'-benzo groups in thiocarbocyanine dyes resulted in increased soly. and in a hypochromic shift of the abs. max. of 21 m μ ; the bathochromic effect in respect to the unsubstituted thiocarbocyanines is about 17 m μ . Replacement of H in the 9-position by Me in these dyes results in a 20-m μ shift of the max. to shorter wavelengths and is similar to that observed in 4,5,4',5'- and 6,7,8',7'-dibenzo derivs. (Brooker and White, *C.A.* 29, 2950). The tetramethylene derivs. are sensitizers of medium effectiveness; their 9-Et derivs., in contrast with the corresponding dibenzo compds., are little inclined to produce sensitization of the 2nd order. *ar-Tetrahydro-1-naphthylamine* (7.35 g.) in 8 cc. dry C₆H₆ and 0.12 g. Ac₂O, heated on a steam bath 0.5 hr. and cooled yielded 7.38 g. *Ac deriv.* (with an addnl. 1.12 g. obtainable from the mother liquor), m. 160-1° (from EtOH). This, boiled in 20 parts dry C₆H₆ with 0.3 mol. P₂S, 1 hr., yielded, after extn. with aq. NaOH and pptn. by CO₂, 30% *thioacetyl deriv.*, m. 100-7° (from 50% EtOH; charcoal). The latter (4.1 g.) in 40 cc. 4% NaOH, slowly added to 14.2 g. K₂Fe(CN)₆ in 60 cc. H₂O at 2-3° and allowed to stand overnight, yielded 55% 2-methyl-4,5-tetramethylenebenzothiazole, isolated as the picrate: free base (I) m. 67-8° (from EtOH). I (0.25 g.) and 0.5 g. *p*-MeC₆H₄SO₂Et were heated to 100-70° 10 hrs. under a reflux condenser, with protection from moisture, and the resulting quaternary salt was treated with 1.5 cc. dry pyridine and 0.28 g. HC(OEt)₂ and heated to 139-40° 1 hr.; the dye, sepd. by addn. of Et₂O, dissolved in MeOH, and treated with 10% KI soln., yielded 21.3% 3,3'-diethyl-4,5,4',5'-bis(tetramethylene)thiocarbocyanine iodide, shiny green needles, m. 228-9° (from EtOH), abs. max. 574 m μ . Use of MeC(OEt)₂ in the above gave 15% of the corresponding 9-Me deriv., red-violet prisms, m. 204-7° (decompn.; from abs. EtOH), abs. max. 554 m μ . EtC(OEt)₂ gave 10.2% of the corresponding 9-Et deriv., violet prisms, m. 197-9° (from abs. EtOH), abs. max. 554 m μ . I and an equiv. amt. of *p*-MeC₆H₄SO₂Me heated to 130-40° 5 hrs. yielded 71% quaternary salt, m. 202° (from Me₂CO); this with EtC(OEt)₂ in pyridine as above yielded 28% 3,3'-dimethyl-9-ethyl-4,5,4',5'-bis(tetramethylene)thiocarbocyanine iodide, brown-red prisms, m. 193-5° (from abs. EtOH), abs. max. 554 m μ .
G. M. Kosolapoff

10

COMMON ELEMENTS

COMMON ELEMENTS

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

LETTERS

CP

6-Hydroxythiazoline-2-thione. I. I. Levkoev, N. N. Sveshnikov, and L. V. Rozvadovskaya. U.S.S.R. 66,789, June 30, 1947. S.C.(S).NR.CH:C(CR':CR'')_nCH:NAr,

where R is H, alkyl, aralkyl, or aryl, R' and R'' are H, alkyl, halogen, alkoxy, acyloxy, or a nitro group, Ar is an aromatic radical, and n is 0, 1, or 2, are obtained by condensation of thiazolidine-2-thione-4-one or its 3-alkyl, aralkyl, or aryl substitution product with compds. of the general formula ArN:C(CR':CR'')_nNHAr. The condensation is carried out in pyridine at room temp.

M. Horsch

10

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CODES

PROCESSES AND PROPERTIES INDEX

5

9-Alkyl-4,5,4',5'-dibenzothiocyanines. I. I. Levkova, N. N. Syzhanikova, T. V. Belostotskaya, and L. D. Zhilina. U.S.S.R. 69,296, Sept. 30, 1947. In the production of these cyanines by heating quaternary salts of 2-methyl-4,5-benzobenzothiazole with *o*-esters of carboxylic acids in pyridine, the process is carried out in the presence of Ac₂O. M. Hosh

COMMON ELEMENTS

COMMON VARIABLES INDEX

ASB-ILA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

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LETTERS

LEVKOYEV, I.I.; SVESHNIKOV, N.N.

Some by-products of carbocyanine condensation. Trudy NIKFI no.7:
13-16 '47. (MIRA 11:6)

1. Sinteticheskaya laboratoriya Nauchno-issledovatel'skogo kino-
foto-instituta, Moskva.

(Cyanine dyes)

LEVKOYEV, I.I.; SVESHNIKOV, N.N.; GORBACHEVA, I.N.; VOMPE, A.F.

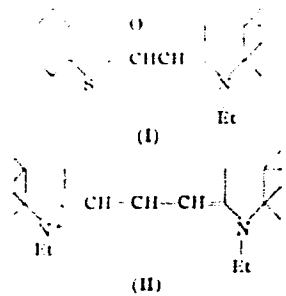
Optical properties of some thiocarbocyanines with substitutes in heterocyclic radicals. Trudy NIKFI no.7:25-33 '47. (MIRA 11:6)

1. Sinteticheskaya laboratoriya Nauchno-issledovatel'skogo kino-foto-instituta, Moskva.
(Thiocarbocyanine--Optical properties)

Chem A

10

Structure of merocyanine dyes. I. I. Levzov, N. N. Svishnikov, and E. B. Lifshits (All Union Cine-Photo Research Inst., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 74, 275 (1959); cf. C. I. 39, 2259. Exam. of the ab-



sorption spectra of merocyanine dyes having the basic structure I, in which the substituent given is N-contg. heterocycle, gave the following max. (m μ in EtOH and CHCl₃, resp.): (a) 3,3-dimethylindoline 532, 522; (b) thiazoline 513, 505; (c) benzoxazole 522, 512; (d) benzoxelenazole 557, 545; (e) benzothiazole, 554, 544; (f) 5-methyl-1,3,4-thiadiazole 544, 536; (g) 2-pyridine 588, 585; (h) thiazole 558, 554; (i) 1-quinoline 640, 635; (j) 2-pyridine 555, 572; (k) 1-methylbenzimidazole 524, 537. Carboyanines (II) having analogous substituents gave, resp.: (a) 545, 555; (b) 445, 450; (c) 484, 492; (d) 570, 578; (e) 557, 568; (f) 513, 520; (g) 604, 610; (h) 543, 550; (i) 705, 712; (j) 590, 596; (k) 490, 495. As the basicity of the heterocycle increases, the hypsochromic shift drops at first, then begins to increase; this behavior argues against the usually accepted keto-enol formulation of such dyes, which would be expected to give a unidirectional hypsochromic shift. Further exam. of the spectra in MeOH, EtOH, BuOH, CHCl₃, CCl₄, CCl₂, and n-C₄H₉ showed that dyes based on 3,3-dimethylindolenine, benzothiazole, 5-methylthiadiazole, and thiazole show a shift of the max. to shorter waves with decreased solvent polarity; dyes with more basic groups (thiazole, pyridine, and benzimidazole) give a bathochromic shift, followed by reversal (about the BuOH or CHCl₃ section of the series). Hence, the 1st group of the merocyanines display an approach to a covalent keto structure, while compds. of the 2nd group at first also approach a structure intermediate between the keto and the ionic enol form, then reverse the trend and approach the keto form. In ales. the structure, thus, approaches the ionic formulation.

G. M. Kosoloff

1957

SVESHNIKOV, N. N.

USSR/Chemistry - Photography

Mar 52

"Some Derivatives of Benzthiazole. III. 2,5,6- and 2,6,7-Trimethylbenzthiazoles," I. I. Levkoyev, N. N. Sveshnikov, N. S. Barbyn', M. P. Pashin, All-Union Sci Res Inst of Cinematography and Photography

"Zhur Obshch Khim" Vol XXII, No 3, 1952, pp 516-521

When oxidized, 3,4-dimethyl thioacetanilide and 3,4-dimethyl phenyl thiourea, through breaking of the thiazole ring in the o- and p-positions with reference to the methyl group, form mixts of 5,6-dimethylbenzthiazoles which contain methyl or amino groups, respect, in the "2" position. These compds and some of their derivs were studied.

209T49

SVESHNIKOV, N. N.

USSR/Chemistry - Photographic Dyes

May 52

"Investigations in the Field of Cyanine Dyes, VII. The Properties of Tetramethyl Thiocarbocyanines," I. I. Levkoyev, A. F. Vompe, N. N. Sveshnikov, N. S. Barbyn', All-Union Sci-Rec Cinematograph Inst

Zhur Obshch Khim, Vol 22, No 5, pp 879-886

Authors produced 23 symmetrical tetramethyl thia-carbocyanines with methyl groups in different positions on the benzene nucleus of the heterocyclic radical. They obtained 2,4,5-, 2,4,7-, 2,5,7-trimethylbenzthiazoles and some of their derivs. In the transition from dimethyl to tetramethyl

263T38

thiocarbocyanine, the transmittance max of the dye was shifted to the long-wave portion of the spectrum in all cases. The introduction of the methyl groups at the 5,5' and 6,6' position gives a markedly greater bathochromic effect.

263T38

SVESHNIKOV, N.N.; LEVKOYEV, I.I.; KRASNOVA, T.V.

Action of nitrous acid on o-methoxy-N, N-dimethylaniline. Zhur.
Obshchey Khim. 22, 1170-2 '52. (MLRA 5:8)
(CA 47 no.13:6363 '53)

1. All-Union CinePhoto Inst., Leningrad.

232T9

USSR/Chemistry - Photographic Dyes

1 Jun 52

"The Action of Amines on Some Thio carbocyanines Containing Alkoxy or Alkylmercapto Groups in the Meso Position," N. N. Sveshnikov, I. I. Levkoyev, B. S. Portnyaya, E. B. Lifshits, All-Union Sci Res Cime-photo Inst

"Dok Ak Nauk SSSR" Vol 84, No 4, pp 733-736

Studied action of primary and secondary amines on 9-alkoxy- and 9-methylmercaptothiocarbocyanines which yielded the previously unknown thiocarbocyanine having the amino group in the 9-position. Also prepd 9-butylamino and

232T9

9-piperidinethiocarbocyanines, 3,3'-diethyl-9-phenylaminothiocarbocyaniniodide, 1,3-bis(3'-ethylbenzothiazolimidine-2')-propanethione (2), 1,3-bis(3'-ethylbenzothiazolimidine-2')-propanone(2), 9-phenylmethylamino- and 9-acetyl-phenylaminothiocarbocyanines. Studied reaction of meso-alkoxy carbocyanine iodides with tertiary amines, which resulted in the splitting off of alkyl halides to form 1,3-disubstituted propanones. Absorption spectra of these substances show that increasing the electron donor character of the 9-substituent results in a shift to the lower wave length. Presented by Acad V. M. Rodionov 3 Apr 52.

232T9

SVESHNIKOV, N. N.

PA 227T12

SVESHNIKOV, N. N.

USSR/Chemistry - Photographic
Sensitizers

1 Aug 52

"The Influence of Steric Hindrances on the Color of 5,6,5',6'-Tetrasubstituted, Thio-carbocyanines," I.I. Levkoyev, N.N. Sveshnikov, N.S. Barvyn', All-Union Sci Res Cinephoto Inst

"Dok Ak Nauk SSSR" Vol 85, No 4, pp 805-808

A series of 5,5'-dimethoxy-6,6'-bis(acylamino)- and 6,6'-bis(N-methyl-N-acylamino) thio-carbocyanines were synthesized from quaternary salts of corresponding 2-methylbenzthiozols and their absorption spectra measured. This revealed that introduction of a methoxy group

227T12

in the 5,5'-position of 6,6'-disubstituted thio-carbocyanines contg amino or substituted amino groups results in a bathochromic shift of the abs max in all cases except 6,6'-bis(dimethylamino)-derivs. The anomalous color of 5,5'-dimethoxy-6,6'-bis(dimethylamino) thio-carbocyanines is explained as due to spatial hindrances preventing orientation of substituents in positions more favorable for their interaction with the basic chromophore. Presented by Acad V. M. Rodionov 30 May 52.

227T12

SVESHNIKOV, N. N.; LEVKOYEV, I. I.; ZHIRYAKOV, V. G. and BARVIN¹, N. S.

Studies of Cyanine Dyes. VIII. On Some 5, 5'- and 6, 6'- Disubstituted Thiocarbocyanines, page 1263, Sbornik Statey po obshchey khimii (Collection of Papers on General Chemistry), Vol II, Moscow-Leningrad, 1953, pages 1680-1686.

All Union Sci Res Cinematography Inst, Moscow Inst of Fine Chemical Technology
imeni M. V. Lomonosov

SVESHNIKOV, N.N.

USSR •

✓ Cyanine dyes. VIII. Some 5,5'- and 6,6'-disubstituted thiacyanopyrimidines. I. I. Levkoev, V. G. Zhiryakov, N. N. Sveshnikov, and N. S. Baryva (M. V. Leonovskiy) ¹⁵

Fine Chem. Technol., Moscow). *Sbornik Statek Obshchey Khim.* 2, 1203-72 (1953); cf. C.A. 41, 5306c; 43, 9453d; 48, 2499a. —Heating 53.7 g. p- $\text{EtOC}_6\text{H}_4\text{NHAc}$ and 200 ml. HNO_3 (d. 1.1) in 0.5 hr. to 40° followed by stirring 0.3 hr. at 40°, dila. with H_2O , heating slowly to 50° for 15 min. gave after cooling 66% 3-nitro-4-acetamidophenetole, m. 99-8°; hydrolysis of this with aq. alc. NaOH gave 70% 3-nitro-4-aminophenetole, m. 107-8°. This diazotized in 60% H_2SO_4 and treated with hot Cu_2Br_2 soln. gave 61% 3-nitro-4-bromophenetole, m. 56-7° (from ligroine), which refluxed with Na_2S_2 soln. 4.5 hrs. gave 45% 2,3'-dinitro-4,4'-diethoxydiphenyl disulfide, m. 184-5° (from C_6H_6). This (11.88 g.) and 31.9 g. Zn dust added to 120 ml. AcOH and heated 1 hr. on a steam bath, followed by heating 4 hrs. to 140° with 53 ml. Ac_2O gave on cooling, filtration and extrn. with Et_2O , 57% 5-ethoxy-2-methylbenzothiazole, b_p 161-3°, which solidified on cooling; picrate, m. 177-8° (cf. Brooker, et al., C.A. 40, 1515⁴). Oxidation of thioacetyl-p-phenetidine with $\text{K}_2\text{Fe}(\text{CN})_6$ in alk. soln. gave 80% 6-ethoxy-2-methylbenzothiazole, m. 56-7°; picrate, m. 169-70°. Reduction of 4-nitrodiphenyl ether with SnCl_2 gave 71% amino analog, m. 83-5°; treatment with Ac_2O gave 89% 4-acetamidodiphenyl ether, m. 130°. This (2.27 g.) in 10 ml. C_6H_6 treated at reflux with 0.66 g. P_2S_5 gave after refluxing 0.5 hr., extrn. with 5% NaOH and passage of CO_2 into the ext. after acidification with AcOH, gave 40% 4-thioacetyl-diphenyl ether, m. 94-5° (from dil. EtOH). This

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L. S. J. ...

(2.43 g.) in 3 ml. EtOH was treated hot with 1.2 g. NaOH in 30 ml. HCl, filtered and treated with 0.6 g. $K_2Fe(CN)_6$ in 35 ml. H_2O at 4-5°, yielding after 1 hr. 0.78 g. 6-phenoxy-2-methylbenzothiazole, m. 120° (from EtOH). Heating 5-methoxy-2-methylbenzothiazole with HBr (d. 1.475) 6 hrs. gave 87% 5-hydroxy-2-methylbenzothiazole (1), m. 153-9° (from EtOH). Similarly was prepd. 78% 6-hydroxy-2-methylbenzothiazole, b₃ 26°, m. 161-2°. I (0.5 g.) and 0.1 g. Na in 3 ml. EtOH heated with 0.74 g. $ClCH_2CO_2Et$ 20 min. to 125-30°, then shaken out with 5% KOH, gave 41% 5-carboethoxymethoxy-2-methylbenzothiazole, m. 41-2° (from ligroine); picrate, m. 152-3°. Similar reaction with $CH_2=CHCH_2Cl$ gave 48% 5-allyloxy-2-methylbenzothiazole, b₃ 149-1°, whose picrate, m. 167-8°. The use of $PhCH_2Cl$ similarly gave 60% 5-benzyloxy-2-methylbenzothiazole, m. 78-9° (from ligroine); picrate, m. 184-5°. Refluxing 13.2 g. 6-hydroxy-2-methylbenzothiazole with 14.64 g. $ClCH_2CO_2Et$ and 11.06 g. powd. K_2CO_3 in dry Me_2CO 8 hrs. gave 52% 6-carboethoxymethoxy-2-methylbenzothiazole, m. 46-8° (from ligroine); picrate, m. 154-5°; methiodide, m. 172-3°; ethiodide, m. 149-50°. Similarly the use of $CH_2=CHCH_2Br$ gave 35% 6-allyloxy-2-methylbenzothiazole, b₃ 152°, m. 31-2° (cf. Ochiai and Nishizawa, C.A. 36, 5475°); picrate, m. 153-4°; methiodide, m. 200-1°; ethiodide, m. 126-7°. Similarly $PhCH_2Cl$ gave 63% 6-benzyloxy-2-methylbenzothiazole, m. 73-4°; picrate, m. 144-5°; methiodide, m. 208-7°; ethiodide, m. 184-5°. Heating 6.2 g. 6-carboethoxymethoxy-2-methylbenzothiazole in 30 ml. 10% KOH 0.5 hr. on a steam bath gave after acidification 91% 6-carboxymethoxy-2-methylbenzothiazole, m. 197-8° (from EtOH); picrate, m. 189-90°. The 6- and 6-alkoxy-2-

methylbenzothiazoles were heated with 5% excess p-Me-C₆H₄SO₂Et 6 hrs. at 140-50° to yield the corresponding quaternary salts, which were treated with pyridine and the desired ortho-carboxylic acid ester and heated 1 hr. at 130-5°, the product taken up in EtOH and treated with KI soln. to yield the following thiocarbocyanide iodides (substituents given): 3,3'-diethyl-5,5'-diethoxy, green, decomp. 230°; 3,3'-diethyl-9-methyl-5,5'-diethoxy, green, decomp. 234°; 3,3',9-triethyl-5,5'-diethoxy, green, decomp. 237°; 3,3'-dimethyl-9-ethyl-5,5'-diethoxy, red, decomp. 212°; 3,3'-diethyl-6,6'-diethoxy, green, decomp. 250°; 3,3'-diethyl-9-methyl-6,6'-diethoxy, red-violet, decomp. 265°; 3,3',9-triethyl-6,6'-diethoxy, green, decomp. 240°; 3,3'-dimethyl-9-ethyl-6,6'-diethoxy, red, decomp. 239°; 3,3'-diethyl-5,5'-dibenzoyloxy, violet-brown, decomp. 221°; 3,3'-diethyl-9-methyl-5,5'-dibenzoyloxy, red-brown, decomp. 222°; 3,3',9-triethyl-5,5'-dibenzoyloxy, blue-violet, decomp. 185°; 3,3'-diethyl-6,6'-dibenzoyloxy, green, decomp. 237°; 3,3'-diethyl-9-methyl-6,6'-dibenzoyloxy, red-brown, decomp. 238°; 3,3',9-triethyl-6,6'-dibenzoyloxy, blue, decomp. 211°; 3,3'-dimethyl-9-ethyl-6,6'-dibenzoyloxy, red-brown, decomp. 225°; 3,3'-diethyl-5,5'-dicarboethoxymethoxy, violet, decomp. 201°; 3,3'-diethyl-9-methyl-5,5'-dicarboethoxymethoxy, red-brown, decomp. 222°; 3,3',9-triethyl-5,5'-dicarboethoxymethoxy, blue, decomp. 186°; 3,3'-diethyl-6,6'-dicarboethoxymethoxy, green,

decomp. 132°; 3,3'-diethyl-9-methyl-6,6'-dicarboethoxymethoxy, red-brown, decomp. 242°; 3,3',9-triethyl-6,6'-dicarboethoxymethoxy, red-violet, decomp. 163°; 3,3'-dimethyl-9-ethyl-6,6'-dicarboethoxymethoxy, red-violet, decomp. 221°; 3,3'-diethyl-5,5'-diallyloxy, green, decomp. 256°; 3,3'-diethyl-9-methyl-5,5'-diallyloxy, green, decomp. 247°; 3,3',9-triethyl-5,5'-diallyloxy, green, decomp. 227°; 3,3'-diethyl-6,6'-diallyloxy, green, decomp. 230°; 3,3'-diethyl-9-methyl-6,6'-diallyloxy, violet, decomp. 237°; 3,3',9-triethyl-6,6'-diallyloxy, violet, decomp. 213°; 3,3'-dimethyl-9-ethyl-6,6'-diallyloxy, violet-grey, decomp. 237°; 3,3'-diethyl-6,6'-dicarboxymethoxy, green, decomp. 230°; 3,3'-diethyl-9-methyl-6,6'-dicarboxymethoxy, violet, decomp. 232°; 3,3',9-triethyl-6,6'-dicarboxymethoxy, brown, decomp. 240°; 3,3'-dimethyl-9-ethyl-6,6'-dicarboxymethoxy, brown, decomp. 242°; 3,3'-diethyl-6,6'-diphenoxy, green, decomp. 242°; 3,3',9-triethyl-6,6'-diphenoxy, green, decomp. 226°. The

following abs. max. (in $\mu\mu$) were observed in EtOH for dialkoxythiacarboyanines (substituents at the hetero ring and in 5,5', then 6,6' positions given, resp.): H, H 567; H, H 567; H, Me 543; H, Me 543; H, Et 547; H, Et 547; MeO, H 570; MeO, H 572; MeO, Me 560; MeO, Me 567; MeO, Et 581; MeO, Et 583; EtO, H 576; EtO, H 572; EtO, Me 550; EtO, Me 559; EtO, Et 581; EtO, Et 581; PhCH₃O, H 578; PhCH₃O, H 572; PhCH₃O, Me 564; PhCH₃O, Me 560; PhCH₃O, Et 584; PhCH₃O, Et 584; EtO₂CCH₃O, H 575; EtO₂CCH₃O, H 570; EtO₂CCH₃O, Me 558; EtO₂CCH₃O, Me 550; EtO₂CCH₃O, Et 581; EtO₂CCH₃O, Et 582; CH₃:CHCH₃O, H 578; CH₃:CHCH₃O, H 572; CH₃:CHCH₃O, Me 556; CH₃:CHCH₃O, Me 559; CH₃:CHCH₃O, Et 583; CH₃:CHCH₃O, Et 584; HO₂CCH₃O, H —; HO₂CCH₃O, H 572; HO₂CCH₃O, Me —; HO₂CCH₃O, Me 558; HO₂CCH₃O, Et —; HO₂CCH₃O, Et —; HO₂CCH₃O, Et 584; PhO, H —; PhO, H 569; PhO, Me —; PhO, Me —; PhO, Et —; PhO, Et 582.

The abs. max. (in $\mu\mu$) of 9-ethyl-x'-dialkoxythiacarboyanines are as follows: 5,5'-disubstituted derivs. (with substituent on the heterocyclic atom shown): H 542; OMe 558; OEt 556; 6,6'-disubstituted derivs. (with substituent on the heterocyclic atom shown): H 542; OMe 560; OEt 558; PhCH₃O 561; EtO₂CCH₃O 558; CH₃:CH₃O 560; HO₂CCH₃O 580.

G. M. Kosolapoff

BY SPESHNIKOV, N.N.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Lavkojev, I.I.	"Investigations in the Field of Polymethine Dyes"	Ministry of Culture USSR
Sveshnikov, N.N.		
Vompe, A.F.		
Portnova, B.S.		
Spasokukotskiy, N.S.		
Deychmeyster, N.V.		

SO: W-30604, 7 July 1954

Sveshnikov, N. N.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 151 - 19/38

Authors : Levkoev, I. I.; Sveshnikov, N. N.; Gorbacheva, I. N.; Barvyn, N. S.; and Krasnova, T. V.

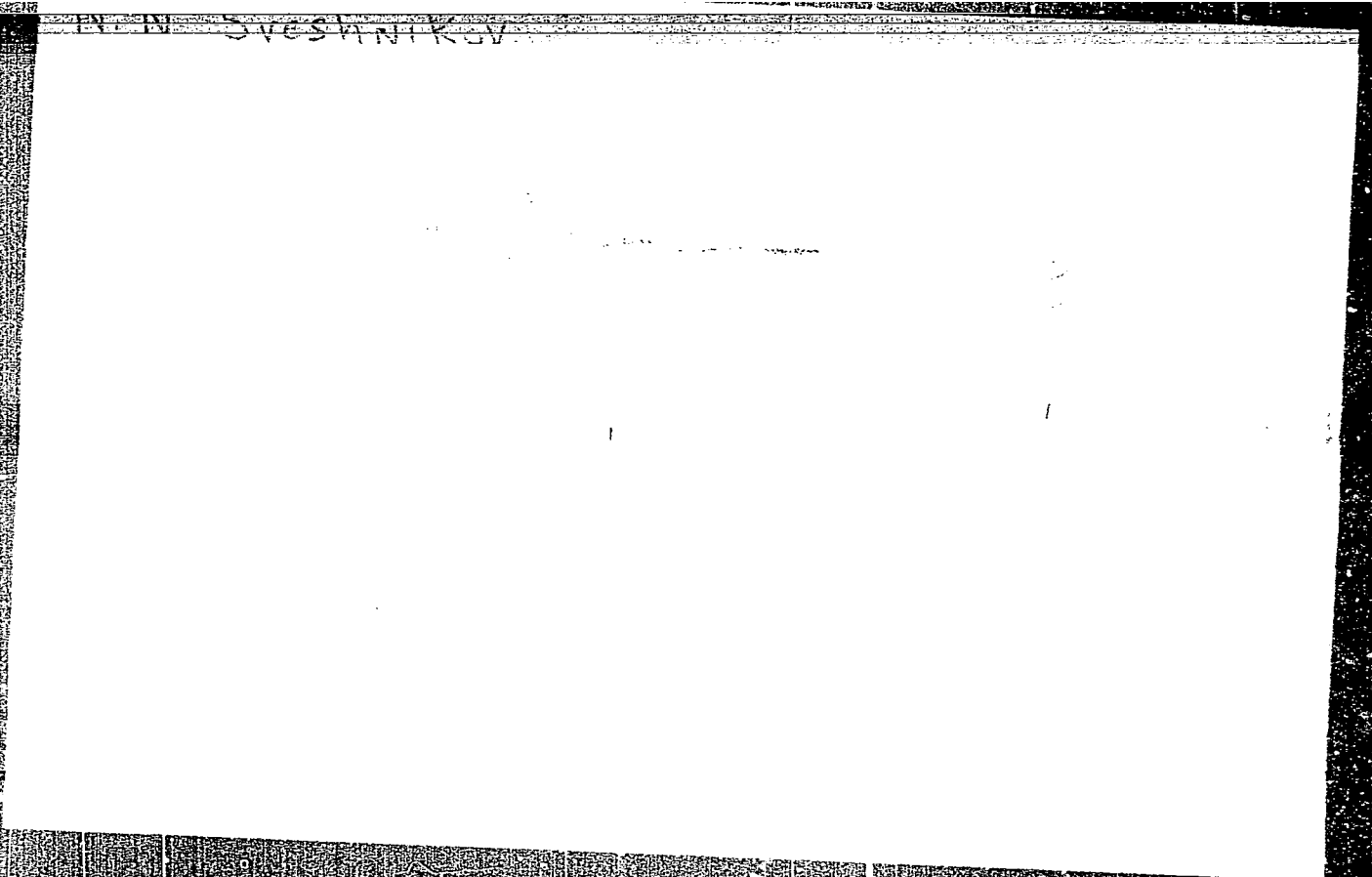
Title : Certain benzthiazole derivatives. Part 5.- Synthesis of 5-substituted 6-dimethylamino-2-methylbenzthiazoles

Periodical : Zhur. ob. khim. 24/2, 280-291, Feb 1954

Abstract : The reaction of oxidation with potassium bichromate of various 2-substituted 4-aminomethyl- and dimethylanilines in the presence of sodium thiosulfate was investigated. The synthesis of homologous thiosulfonic acids is described. A new general method for the conversion of p-phenylene diamino thiosulfonic acids into 6-amino-derivatives of methylbenzthiazole, is introduced. The conditions most favorable for the synthesis of 5-substituted 6-dimethylamino-2-methylbenzthiazoles, as well as homologous 6-amino- and 6-methylamino-5-methoxy-derivatives, are discussed. Twenty references: 3-USA; 3-French; 5-USSR; 1-Scandinavian and 8-German (1889-1953).

Institution : Scientific Research Motion Picture and Photo-Institute

Submitted : August 20, 1953



SVESHNIKOV, N.N.

AUTHORS: Levkoyev, I. I., Sveshnikov, N. N., 79-11-40/56
Kulik, Ye. Z., Krasnova, T. V.

TITLE: Investigations in the Field of Cyanine Dyes. XI. On Some 7,7'-Dimethylthiacarboyanines (Issledovaniya v oblasti tsianinovykh krasiteley. XI. O nekotorykh 7,7' - Dimetil'tiakarbotsianinakh).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 3097-3106 (USSR)

ABSTRACT: Disubstituted thiocarboyanines with methoxy-, ethoxy-, acetoxy-, amino-, acetamino- and dimethylamino-groups in 7,7'-positions possess properties of dyes, but they are weak sensitizers for silver halide photographic emulsions. In order to find out how far the specific properties of these dyes are connected with the electron-influence of the substituents, the authors had to investigate the thiocarboyanines with comparatively neutral methyl groups in 7,7'-positions. The synthesis of 2,7-dimethylbenzthiazole was carried out. From the quarternary salts of this base and other dimethylbenzthiazoles the authors obtained a number of carbo- and dicarboyanines, as well as 2-p-dimethylaminostyrene derivatives. By oxidation of

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7,7' - Dimethylthiacarboyanines

thioacetyl-m-toluidine with potassium ferrocyanide a mixture of 2,7- and 2,5-dimethylbenzthiazoles is obtained. The entry of the methyl groups into the hetero-residues of thiacarboyanines causes a practically equal deep-colored effect as well in the 4,4' and 7,7' as in the 5,5' - 6,6' positions. But the presence of these groups in the above-mentioned positions exerts a different influence on the basicity of the dyes and the benzthiazole-residue. The part played by the electron-dislocations in connection with the changes in color remains problematical. There are 2 tables, and 28 references, 14 of which are Slavic.

ASSOCIATION: All-Union Cinema- and Photographic Scientific Research Institute (Vsesoyuznyy nauchnoissledovatel'skiy kinofotoinstitut)

SUBMITTED: November 5, 1956

- Card 2/2
1. Cyanine dyes - Chemical analysis
 2. 7,7'-Dimethylthiacarboyanines - Derivatives
 3. 2,7' - Dimethylbenzthiazole - Synthesis

LEVKOYEV, I.I., kand.khim.nauk; VOMPE, A.F., doktor khim.nauk;
SVESHNIKOV, N.N., kand.khim.nauk

Successes of the chemistry of sensitizing dyes. Khim.nauk i prom.
3 no.5:587-606 '58. (MIRA 11:11)
(Dyes and dyeing) (Photographic chemistry) (Silver halides)

5.3610,5.3620

77403
SOV/79-30-1-64/78

AUTHORS: Levkoyev, I. I., Sveshnikov, N. N., Barvyn', N. S.,
Krasnova, T. V.

TITLE: Investigations in the Field of Cyanine Dyes. XII.
Concerning Some 5,5'-Dimethoxy-6,6'-Diaminothiacarbocyanines

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 291-299
(USSR)

ABSTRACT: 5,5'-Dimethoxycyanines containing free or substituted
aminogroups in 6,6'-positions (as well as 6,6'-amino-
derivatives) were synthesized in order to study batho-
chromic shifts in absorption maxima caused by introduc-
tion of substituents into the chromophore. The following
intermediates were synthesized: 2-methyl-6-p-toluene-
sulfamylaminobenzothiazole (I) (by heating 2-methyl-6-
aminobenzothiazole with p-toluenesulfonyl chloride in
pyridine and subsequent addition of dilute HCl) (mp 209-
210°); 2-methyl-6-N-methyl-N-p-toluenesulfamylaminobenzo-
thiazole (II) (by addition of solid dimethyl sulfate to
the filtered solution of (I) and NaOH) (mp 160-160.5°);

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Diaminothiacarbocyanines

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cyanine perchlorate (2) (yield 15%, mp 170°, λ_{\max} 588); its 3,3',9-triethyl derivative (3) yield 10%, mp 167-168°, λ_{\max} 592); 3,3'-diethyl-5,5'-dimethoxy-6,6'-diacetylaminothiacarbocyanine bromide (4) (yield 40%, mp 270-272°, λ_{\max} 598); its 3,3'-diethyl-9-methyl derivative (5) (yield 26% mp 262-264°, λ_{\max} 578); its 3,3'-9-triethyl derivative (6) (yield 19%, mp 215-216°, λ_{\max} 582); its 3,3'-dimethyl-9-ethyl derivative (7) (yield 35%, mp 243-245°, λ_{\max} 578); 3,3'-diethyl-5,5'-dimethoxy-6,6'-bis(N-methyl-N-acetylamino)thiacarbocyanine iodide (8) (yield 28%, mp 294-295°, λ_{\max} 583); its 3,3'-diethyl-9-methyl derivative (9) (yield 25%, mp 292-294°, λ_{\max} 565); its 3,3'-9-triethyl derivative (10) (yield 33%, mp 258-259°, λ_{\max} 568); 3,3'-diethyl-5,5'-

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XII, Concerning Some 5,5'-Dimethoxy-6,6'-
Diaminothiacarbocyanines

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-p-toluene-sulfamylamino)thiacarbocyanine iodide (17).
(yield 75%, mp 228-230°, λ_{\max} 568). The 6,6'-bis(N-
methyl-N-acetylamino derivatives were prepared by
heating respective iodides of 6,6'-bis(methylamino)
derivatives with acetic anhydride and subsequent addi-
tion of ether, alcohol, and KI solutions to the cooled
reaction mass. The 6,6'-bis(methylamino) derivatives
were made by boiling iodides of 6,6'-bis-(N-methyl-N-
-p-toluenesulfamylamino)thiacarbocyanine derivatives
with HCl. The general formulas of the above compounds
are shown below.

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Investigations in the Field of Cyanine Dyes.
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 Diaminothiacarbocyanines

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Table 1

Substituents in 6,6'-positions	Absorption maximum (m μ)		Shift in λ_{max} in comparison with the unsubstituted carbocyanine (in m μ)	Calculated $\Delta\lambda$ (E) additive shift (in m μ)	Deviation of the λ_{max} of dye (E) from the calculated (in m μ)
	(I)	(II)			
		Our data	Literature data		
H	576	558	—	18	—
NH ₂	616	594	595 597	58	54 + 4
CH ₃ NH	630	608	610	72	68 + 4
(CH ₃) ₂ N	604	612	612	46	72 - 26
CH ₃ CONH	598	577	581 579	40	37 + 3
CH ₃ CON(CH ₃)	583	564	—	25	24 + 1
<i>p</i> -CH ₃ C ₆ H ₄ SO ₂ NH	592	572	577 578	34	32 + 2
<i>p</i> -CH ₃ C ₆ H ₄ SO ₂ N(CH ₃)	585	568	570	27	28 - 1

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Investigations in the Field of Cyanine Dyes.
XII. Concerning Some 5,5'-Dimethoxy-6,6'-
Diaminothiacarboyanines

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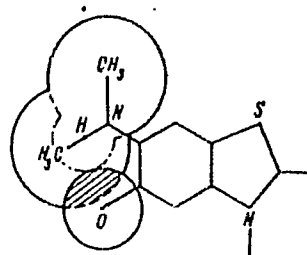


Fig. 1.

There are 2 tables; and 25 references, 19 Soviet, 1 Danish, 2 U.K., 3 U.S. The U.K. and U.S. references are: F. M. Hamer, J. Chem. Soc., 1927, 2798, 1928, 3160, W. R. Remington, J. Am. Chem. Soc., 67, 1838 (1945); N. F. Hall, M. R. Sprinkle, J. Am. Chem. Soc., 54, 3469 (1932); L. P. Hammett, M. A. Paul, *ibid.*, 56, 827 (1934); C. E. Ingham, G. C. Hampson, J. Chem. Soc., 1939, 981; P. W. Vittum, G. H. Brown, J. Am. Chem. Soc., 68, 2235 (1946).

Card 9/10

SVESHNIKOV, N.N.; STOKOVSKAYA, N.S.

Condensation of ethoxymethylenemalonic ester with quaternary salts of heterocyclic bases containing an active methyl group; new method of synthesizing carbocyanine dyes unsaturated in their polymethine chain. Zhur.VKHO 7 no.1:111-112 '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy kono-fotoinstitut.
(Malonic acid) (Heterocyclic compounds)
(Dyes and dyeing)

LEVKOYEV, I.I.; SVESHNIKOV, N.N.; GIPP, N.K.; DURMASHKINA, V.V.; BARVYN', N.S.

Studies in the field of cyanine dyes. Part 14: Some thiocarbocyanines
containing ethyl or isopropyl groups in the heterocyclic residues.
Trudy NIKFI no.40:5-11 '60. (MIRA 15:2)
(Cyanines)(Dyes and dyeing)

KHEYFETS, S.A.; SVESHNIKOV, N.N.

Studies in the field of cyanine dyes. Part 15: 5,5'- and 6,6'-
diphenylthiacarbocyanines. Trudy NIKFI no.40:12-20 '60.(MIRA 15:2)
(Cyanines)(Dyes and dyeing)

SHIROKOVA, N. I.; LEVKOYEV, I. I.; SVESHNIKOV, N. N.

Synthesis of meso-alkyl- and aryl indocarbocyanines and their coloration. Zhur. VKHO 7 no.5:587-588 '62. (MIRA 15:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.

(Carbocyanine dyes)

SVESHNIKOV, N.N.; LEVKOYEV, I.I.; SHIROKOVA, N.I.; DAMIR, N.A.

Action of phosgene on acetylmethylene derivatives of heterocyclic bases and some reactions between the compounds formed. Dokl. AN SSSR 148 no.5:1091-1094 F '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.
Predstavleno akademikom M.I. Kabachnikom.
(Phosgene) (Heterocyclic compounds)

LEVKOYEV, I.I.; SVESHNIKOV, N.N.; SHIROKOVA, N.I.

Some transformations of quaternary salts of 2- β -chloropropenyl
derivatives of heterocyclic bases. Dokl. AN SSSR 153 no.2:
350-353 N '63. (MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.
Predstavleno akademikom M.I.Kabachnikom.

DAMIR, N.A.; SVESHNIKOV, N.N.

Some reactions of 1-alkyl-2-sulfoquinolinium betaines. Zhur. VKHO
10 no. 5: 592-594 '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.

SHIROKOVA, N.I.; SVESHNIKOV, N.M.; LEVKOYEV, I.I.

Effect of quaternary salts of β -chlorovinyl derivatives of
heterocyclic bases on some carboc- and dimethinemerocyanine dyes.
Dokl. AN SSSR 162 no.3:603-606 My '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut. Submitted
September 14, 1964.

KHEYFETS, G.A.; SVESHNIKOV, N.M.

Synthesis and certain reactions of β -alkoxy-substituted poly-
methinehemicyanine dyes. Dokl. AN SSSR 163 no.5:1177-1180 Ag '65.
(MIRA 18:8)

I. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut. Sub-
mitted September 14, 1964.

L 9829-66 EWT(j)/EWA(j)/EWT(m)/EWP(j)/EWA(b)-2 RO/RM

ACC NR: AF5026989

SOURCE CODE: UR/0020/65/164/005/1077/1080

AUTHOR: ^{11.15}Sveshnikov, N. N.; ^{11.15}Damir, N. A.; ^{11.15}Kabachnik, M. I. (Academician)

ORG: VNIKI

ORG: ^{11.15}All-Union Scientific Research Cinephoto Institute (Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut) ^{35 B}

TITLE: The action of phosgene on 1-alkyl-1,2-dihydro-2-quinolones and some reactions of the compounds formed ^{1.11.55}

SOURCE: AN SSSR. Doklady, v. 164, no. 5, 1965, 1077-1080

TOPIC TAGS: phosgene, organic salt, quantitative analysis

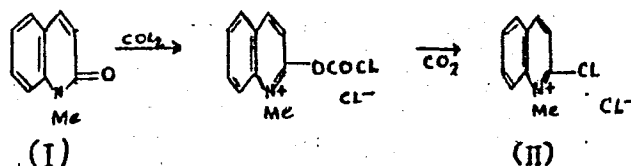
ABSTRACT: Brederock and Brederock (Chem. Ber. 94, 2278, 1961) have obtained from COCl_2 and 1-methyl-1,2-dihydro-2-quinolone (I) a crystalline substance which they called an adduct. The authors of this paper have undertaken to study this reaction and other reactions of a similar type. When 12.4 g. COCl_2 in 22 ml. toluene was added to 8.65 g. (I) in 25 ml. benzene at room temperature, an exothermic reaction

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UDC: 547.831.8
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ACC NR: AP5026989

occurred with evolution of CO_2 and formation of 10.68 g 2-chlorquinoline MeCl (II), m. 130-135 C. The reaction apparently follows the scheme given below and the "adduct" is in fact a quaternary salt of 2-chlorquinoline (III). Similarly



synthesized were 2-chloro-6-methylquinoline-(II) MeCl, m. 150-153 C, 100% yield, and 2-chloro-6-methoxyquinoline-EtCl, m. 175-80 C, 96%. The Cl atom in these compounds is highly mobile and can be easily replaced. Thus, 0.42 g (II) in 3 ml MeOH treated with 0.16 g NaHS in 0.5 ml MeOH (or 0.5 g $\text{Na}_2\text{S}_2\text{O}_3$ in 3 ml) gave yellow 1-methyl-1,2-dihydro-2-quinolinethione, m. 116-117 C, 75.6 and 86%, respectively. Analogously prepared were 1,6-dimethyl-m. 129-130 C, (75 and 89.5%) and 1-ethyl-6-methoxy-1,2-dihydro-2-quinolinethione, m. 90-91 C, 72.7 and 85%.

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