USSR/Cultivated Plants. Decorative Plants. M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68430

Author : Kharkevich, S. S.
Inst : Botanical Garden AS Ukr SSR.
Title : The Use of Caucasian Mountain Plants in the Ukr SSR.

Orig Pub : Tr. Botan. sada AN USSR, 1957, 4, 3-19

Abstract : Cultivation results of certain high-mountain plants from the Northern Caucasus grown at the Botanical Garden of the Ukr SSR Academy of Sciences in Kiev are described. These plants are of interest both as fodder and as decorative plants. -- A. P. Mandenova

Card : 1/1

212

KHARKEVICH, S. S.

Colchicum autumnale L. and the feasibility of its introduction. Bot. zhur. 42 no.1:98-101 Ja '57. (MLRA 10:2)

1. Botanicheskiy sad Akademii nauk Ukrainskoy SSR.
(Meadow safron) (Plant introduction)

KHARKEVICH, S.S. [Kharkevych, S.S.]

Present state and immediate problems of national reserves in the Ukraine. Mat.pro okhor.pryr.na Ukr. no.1:12-26 '58. (MIRA 13:3)

(Ukraine--National parks and reserves)

KHARKEVICH, S.S.; ZINCHENKO, T.V.

Alpine knotweed (Polygonum alpinum All.), its useful properties and possibilities of utilization. Trudy Bot.sada AN URSR 5:38-56 '58. (MIRA 12:2)

(Knotweed) (Tannins)

KHARKEVICH, S.S.

Plants of value in landscape gardening occuring in the Soviet Carpathians. Biul. Glav. bot. sada no.30:22-27 '58. (MIRA 11:6)

1. Botanicheskiy sad Akademii nauk Ukrainskoy SSR.
(Carpathian Mountains--Plants, Ornamental)

KHARKEVICH, S.S.; TEPLITSKAYA, Ye.V.

Biological and economic features of Crambe cordifolia Stev.
Bot.zhur. 43 no.12:1734-1740 D '58. (MIRA 11:12)

1. Botanicheskiy sad AN Ukrainskoy SSR, Kiyev.
(Kale)

GRISHKO, M.M. [Hryshko, M.M.]; SOKOLOVSKIY, O.I. [Sokolovs'kyi, O.I.]; KHARKEVICH, S.S. [Kharkevych, S.S.]

Establishing a reference herbarium at the Botanical Garden of the Academy of Sciences of the Ukrainian S.S.R. composed of plants grown in the botanical gardens of the Ukraine. Visnyk Bot.sads AN URSR no.1:142-143 '59. (MIRA 13:8)
(Kiev--Herbaria)

KHARKEVICH, S.S. [Kharkevych, S.S.]

Botanical gardens of the Ukraine and their objectives in the protection of nature. Trudy Bot.sada AN URSR 6:45-54 '59.
(MIRA 13:5)

(Ukraine--Botanical gardens)
(Plants, Protection of)

KHARKEVICH, S.S.; ZINCHENKO, T.V.

The knotweed Polygonum alpinum All., its cultivation in Kiev and possibilities of utilization. Trudy Bot.Inst.Ser.6 no.7: 389-393 '59. (MIRA 13:4)

1. Botanicheskiy sad AN USSR, Kiyev (for Kharkevich).
2. Kiyevskiy instituut usovershenstvovaniya vrachey (for Zinchenko).
(Kiev--Knotweed)

KHARKEVICH, S.S.

Use of ornamental plants from the wild flora of the U.S.S.R.
Trudy Bot.inst.Ser.6 no.7:483-484 '59. (MIRA 13:4)

1. Botanicheskiy sad AN USSR, Kiyev.
(Plants, Ornamental)

KHARKEVICH, S.S. [Kharkevych, S.S.]; CHOPIK, V.I. [Chopyk, V.I.]

In the Botanical Section of the Ukrainian Society for the Protection of Nature and Promotion of the Development of Natural Resources. Ukr.bot.zhur. 16 no.5:109-110 '59. (MIRA 13:4)
(Ukraine--Botanical societies)

KHARKEVICH, Sigizmund Semenovich [Kharkevych, S.S.]; CHOPIK, Vladimir Ivanovich [Chopyk, V.I.]; KONDRATYUK, Ye.M. [Kondratiuk, IE.M.], kand.biolog.nauk, otv.red.; KOVAL', V.A., red.izd-va; MATVIYCHUK, O.O., tekhn.red.

[Plant wealth of the Ukrainian Carpathians, its utilization and protection] Roslynni bahatstva Ukrains'kykh Karpat, ikh vykorystannia ta okhorona. Kyiv, Vyd-vo Akad.nauk URSR, 1960. 65 p. (MIRA 13:9)

(Carpathian Mountains--Botany)

KHARKEVICH, S.S. [Kharkevych, S.S.]

Open culture of Caucasian rhododendron species at the Botanical Garden of the Academy of Sciences of the Ukrainian S.S.R. Visnyk Bot. sada AN URSR no. 2:27-32 '60. (MIRA 14:4)
(Kiev--Rhododendron)

KHARKEVICH, S.S. [Kharkevych, S.S.]

Plant resources of the Caucasian State Preserve and their utilization in the Ukrainian S.S.R. Mat.prc okhor.pryr.na Ukr. no.2: 61-83 '60. (MIRA 13:8)

(Caucasian Preserve--Botany)

KHARKEVICH, S.S.

Narcissus angustifolius in Transcarpathia. Biul.Glav.bot.sada no.37: 67-73 '60. (MIRA 13:11)

1. Botanicheskiy sad Akademii nauk Ukrainskoy SSR.
(Transcarpathia--Narcissus)

KHARKEVICH, S.S.; GABRIELYAN, E.TS.

Botanical excursion to the Soviet Carpathians; comparing the floras of the Soviet Carpathians and the Caucasus. Izv. AN Arm. SSR. Biol. nauki 13 no.6:13-30 Je '60. (MIRA 13:8)

1. Botanicheskiy sad AN USSR, Kiyev, i Botanicheskiy institut AN ArmSSR, Yerevan.
(CARPATHIAN MOUNTAINS--BOTANY) (CAUCASUS--BOTANY)

KHARKEVICH, S.S.

"Vegetation cover of Poland," vols. 1-2. Reviewed by S.S. Kharkevich. Bot. zhur. 45 no.5:774-777 My '60. (MIRA 13:7)

1. Botanicheskiy sad AN Ukrainskoy SSR, Kiyev.
(Poland--Phytogeography)

KONDRATYUK, Ye.M. [Kondratiuk, IE.M.]; KHARKEVICH, S.S. [Kharkevych, S.S.]; CHOPIK, V.I. [Chopyk, V.I.]

Possibilites for utilizing plants of the natural flora of the Ukrainian Carpathians in landscape gardening. Trudy Bot. sada AN URSR 7:84-101 '60. (MIRA 14:4)
(Carpathian Mountains—Botany) (Plants, Ornamental)

KHARKEVICH, S.S.

The geobotanical exhibition "Caucasus" in the Botanical Garden of the Academy of Sciences of the Ukrainian S.S.R. Biul. Glav. bot. sada no.41:28-35 '61. (MIRA 14:11)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN Ukrainskoy SSR.

(Kiev--Botany--Exhibitions)

KHARKEVICH, Sigizmund Semenovich [Kharkevych, S.S.]; KONDRATYUK, Ye.M. [Kondratiuk, IE.M.], kand.biolog.nauk, otv.red.; KOVAL', V.A., red.; DAKHNO, Yu.M., tekhn.red.

[Caucasian ornamental spring plants under natural conditions and in cultivation in the Ukraine] Vesniani dekoratyvni roslyny Kavkazu v pryrodi ta v kul'turi na Ukraini. Kyiv, Vyd-vo Akad.nauk URSR, 1962. 150 p. (MIRA 15:4)
(Caucasus--Plants, Ornamental)
(Ukraine--Plants, Ornamental)

ARTYUSHENKO, Z.T.; KHARKEVICH, S.S.

Early spring ornamental plants in the Caucasus. Trudy Bot. inst. Ser. 6 no.8:7-31 '62. (MIRA 15:7)
(Caucasus—Plants, Ornamental)

ARTYUSHENKO, Z.T.; KHARKEVICH, S.S.

Early spring ornamental plants in the Crimea. Trudy Bot. inst. Ser. 6 no.8:32-38 '62. (MIRA 15:7)
(Crimea—Plants, Ornamental)

KHARKEVICH, S.S. [Kharkevych, S.S.]

Comparative study of Scopolia from the Carpathians and the Caucasus in cultivation. Visnykh Bot.sada AN URSR no.4:58-65 '62. (MIRA 16:1)

(Kiev—Scopolia)

KHARKEVICH, S.S.

The Crimean desert candle (Eremurus tauricus Stev.) in the Caucasus. Bot. zhur. 49 no.2:259-262 F '64.

(MIRA 17:6)

1. TSentral'nyy respublikanskiy botanicheskiy sad Akademii nauk Ukr.SSR, Kiyev.

KONDRATYUK, Ye M.[Kondratiuk, IE.M.], otv. red.; BILOKIN, [illegible], zam. otv. red.; BURACHINSKIY, O.M. [Burachynskyi, [illegible], red.; ZHARENKO, N.Z., red.; KOLOMIYETS', I.O. [Kolomiiets', I.O.], red.; KOKHNO, M.A., red.; KHARKEVICH, S.S.[Kharkevych, S.S.], red.; CHOPIK, V.I.[Chopyk, V.I.], red.; KAS'YAN, S.M., red.

[Acclimatization and introduction of new plants] Aklimatizatsiia i introduktsiia novykh roslyn. Kyiv, Naukova dumka, 1965. 221 p. (MIRA 18:5)

1. Akademiya nauk URSR, Kiev. Botanichnyi sad.

KHARKEVICH, S.S. [Kharkevych, S.S.]

New habitat of Vesicaria graeca Reut., a species rarely met in the Caucasus. Ukr. bot. zhur. 22 no.5:89-90 '65.

(MIRA 18:10)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN UkrSSR, Kiyev.

KHARKEVICH, S.S.

Introduction of Kolkhida plants in the Ukraine. Biul.Glav.bot. sada no.58:9-14 '65. (MIRA 18:12)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN UkrSSR, Kiyev.

GOVARDOVSKIY, V.I.; KHARKEYEVICH, T.A.

Histochemical and electron microscopic study of the development of photoreceptive cells in a tissue culture. Arkh. anat., gist. i embr. 49 no.8:50-55 Ag '65. (MIRA 18:9)

1. Laboratoriya evolyutsionnoy morfologii (zav.- Ya.A. Vinnikov) Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova, AN SSSR.

KHARKEVICH, Ts.A.

Pharmacology of the ganglion-blocking agent heptamine. Farm.i toks. 24 no.2:156-160 Mr-Ap '61. (MIRA 14:6)

1. Laboratoriya chastnoy farmakologii Instituta farmakologii i khimioterapii AMN SSSR i kafedry farmakologii (zav. laboratoriyey i kafedroy - deystvitel'nyy chlen AMN SSSR prof. V.V. Zakusov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(BUTANE) (AUTONOMIC DRUGS)

KHARKEVICH, V.A., inzh.

Standardize the units and spare parts of excavators. Stroi.i dor.mash. 6 no.4:21 Ap '61. (MIM 14:3)
(Excavating machinery)

KHARKEVICH, V.I.; SAGOYAN, L.N.

Exchange in the system nickel oxide hydrate - water. Ukr. khim. zhur. 31 no.10:1052-1054 '65. (MIRA 19:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut. Submitted April 22, 1964.

KHARKEVICH, V.Kh.

Psychological problems in organizing vocational training in technical schools. Politekh. obuch. no.5:56-58 My '58. (MIRA 11:5)

1.Kremenetskiy pedagogicheskiy institut.
(Psychology, Industrial)
(Vocational education)

KHARKEVICH, V.Kh.

Graphic method for rhythm analysis and its use in motion study. Vop.psikhol. 9 no.2:151 Mr-Ap '63. (MIRA 16:4)

1. Pedagogicheskiy institut imeni I.Franko, Zhitomir.
(Motion study) (Kymography)

MIRONOV, P.N.; KOROLENKO, A.A., dotsent, zaveduyushchiy; KHARKEVICH, Yu.A., glavnyy vrach.

Treatment of balantidiasis. Terap.arkh. 25 no.3:43-48 My-Je '53. (MLRA 6:9)

1. Terapevticheskoye otdeleniye Tomskoy gorodskoy klinicheskoy bol'nitsy. (Balantidiasis)

KHARKEYEVICH, Yu.A.

CHECHEL'NITSKIY, I.I., insh.; VEYS, L.E., insh.; KHARKEYEVICH, Yu.A., insh.

Festive outdoor lighting in Moscow. Gor.khoz.Mosk. 31 no.12:26-27 D '57. (MIRA 10:12)

(Moscow--Lighting, Architectural and decorative)

PA 163T21

USSR/Mathematics - New Techniques May/Jun 50
Computation
Approximation

"Graphic Solution of Partial-Derivative Equations of the Parabolic Type," Yu. F. Kharkeyevich, Irkutsk

"Priklad Matemat i Mekh" Vol XIV, No 3, pp 303-310

D. Yu. Panov developed graphic method for solving boundary-value problems of the Laplace equation. Method of graphing well-known numerical method is based on substitution of differential equation by finite-difference equations (see

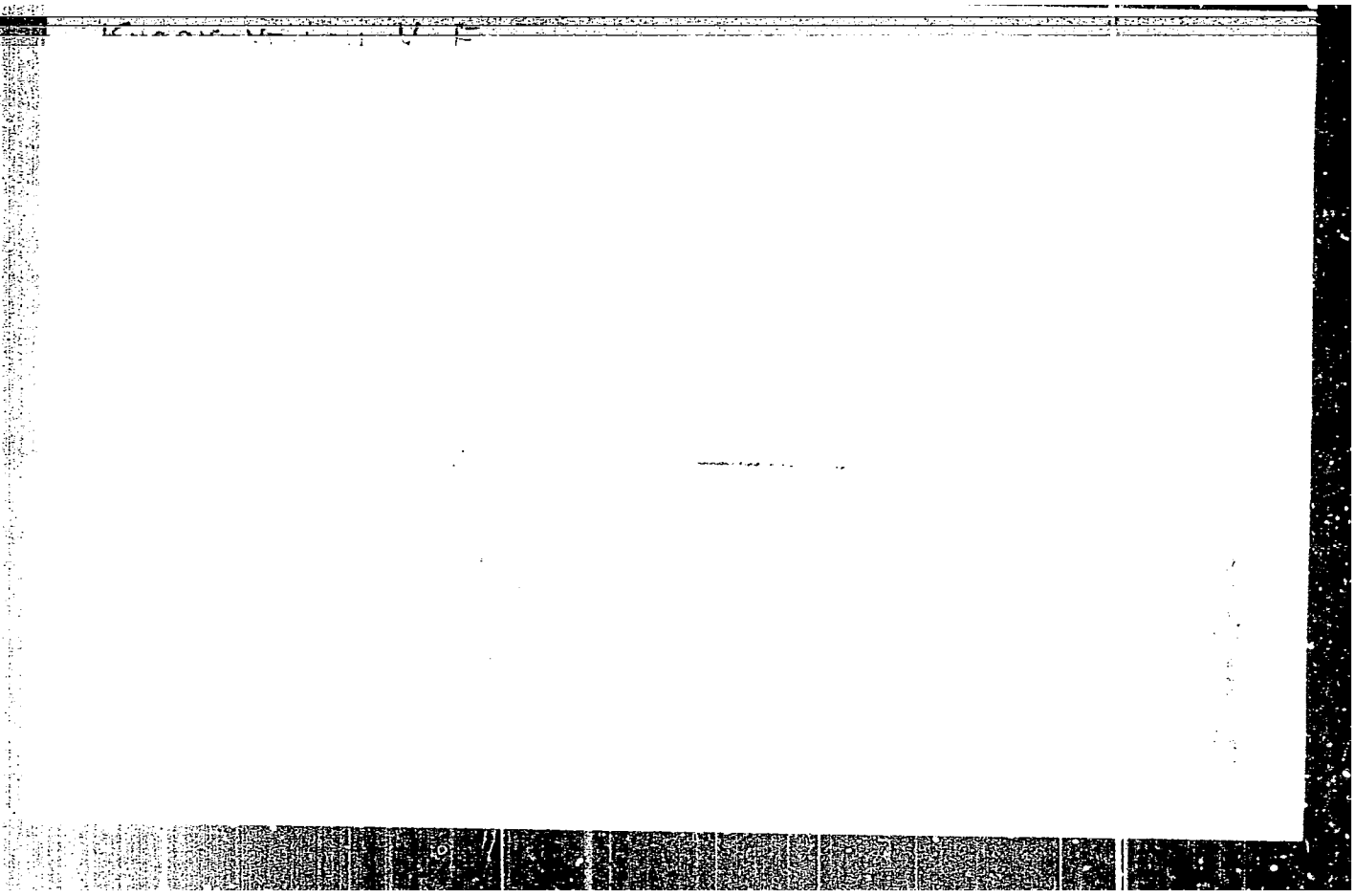
163T21

USSR/Mathematics - New Techniques May/Jun 50
(Contd)

Panov's "Approximate Graphic Solution of Boundary Problems of Laplace's Equation," in "Works of the Central Aerohydrodynamic Institute," published by State Press for Fuel Technology (GTTI) 1934, No 169). It has received the name: "graphic method of grids." Kharkeyevich applies grid method to graphic solution of $u_{xx} = a^2 u_t$. Submitted 31 Aug 48.

KHARKEYEVICH, Yu. F.

163T21



SOV/44-58-4-3014

Translation from: Referativnyy zhurnal, Matematika, 1958, Nr 4, p 84 (USSR)

AUTHOR: Kharkeyevich, Yu. F.

TITLE: A Geometric Interpretation of a Taylor Local Formula (Geometricheskaya interpretatsiya lokal'noy formuly Teylora)

PERIODICAL: Tr. Irkutskogo un-ta, 1957, Nr 15, pp 111-116

ABSTRACT: A construction is made for the values of ξ in the remainder $\frac{(b-a)^n}{n!} f^{(n)}(\xi)$ of the Taylor formula when n=1, 2, 3 and b — a=1.

REVIEWER'S NOTE: In the article there is a series of inaccuracies and incorrect statements. Since in the example studied by the author the values of ξ approach the left end of the interval [a; b] with an increase of n, it is impossible to make a general deduction.

A.G. Shkol'nik

Card 1/1

The weight is 3.2 kg including case and a set of instruction diagrams.

The scientific workers of the Irkutsk University have also designed other mechanical, modelling, portable devices which make it easier to solve an even wider scope of important, practical problems than was considered possible until recently. As regards efficiency and generality they cannot be compared with the big mathematical machines. But these portable devices are accessible to every specialist who must often carry out various computations.

The author deals in detail with the mechanic modelling devices now in use, and points out that A.B.Shtykan, one of the authors, came to the conclusion that for devices based on a kinematic principle, the scheme of operation can be represented by a drawing and utilized for approximate graphic solutions of the problems involved. Such solutions will always be purely graphical and can be performed without computations. The results received can be further developed and extended to new problems independent of the scheme of the device. In their turn, the graphical constructions found will serve as a means of synthesis of new mechanisms the operation of which can again be represented graphically.

ZHUCHIN, D.I.; KHARKHARDIN, L.

Coordination Council. Meeting on prefabrication techniques in rural construction. Izv. ASiA no.1:113-115 '61. (MIRA 14:7)

1. Rukovoditel' sektora ekonomiki stroitel'stva Instituta sel'skikh zdaniy Akademii stroitel'stva i arkhitektury SSSR (for Zhuchin). 2. Glavnyy inzhener sektora ekonomiki stroitel'stva Instituta sel'skikh zdaniy Akademii stroitel'stva i arkhitektury SSSR (for Kharkhardin).
(Construction industry)

ZHUCHIN, D.I.; KONSTANTINOV, S.V.; PROZOROVSKIY, G.N.; SOLNTSEV, S.G.; KHARKHARDIN, L.S.; KLENDO, M.A., inzh., nauchn. red.; PEREVALYUK, N.V., red.

[Rural construction in the Virgin Territory] Sel'skoe stroitel'stvo v TSelinnom krae. Moskva, Stroiizdat, 1964. 89 p. (MIRA 17:9)

KHARKHARDIN, O.S.

Petroleum indistry in Czechoslovakia. Neft. khoz. 35 no.8:68-72 Ag '57. (MIRA 10:11)

(Czechoslovakia--Petroleum industry)

MELIK-GAYKAZYAN, V.I.; BAYCHENKO, A.A.; VORONCHIKHINA, V.V.; LIVSHITS, G.L.; SOROKA, V.I.; RAYVICH, I.D.; KHARKHARDIN, P.P.

Emulsification of flotation oil reagents under industrial conditions and evaluation of the dispersion properties of the obtained emulsions. Koks i khim. no.3:9-13 '64. (MIRA 17:4)

1. Tomskiy politekhnicheskiy institut (for Voronchikhina).
2. Nikitovskaya ugleobogatitel'naya fabrika (for Rayvich).
3. Gorlovskiy koksokhimicheskiy zavod (for Kharkhardin).

TETERUK, G.I.; ZAVYAZKIN, P.G.; ALIYEV, T.M.; ALIYEV, A.G.; MELIK-SHAKHNAZAROV, A.M.; ARULIS, B.K.; BARTENEV, G.M.; YEL'KIN, A.I.; KOSTIN, V.I.; KHARKHARDIN, S.I.; SERGEYEV, A.I.; VARTANOV, S.Kh.; PRIMACHUK, L.I.; MOLODTSOV, A.A.; SHMELEV, N.V.; ROVINSKIY, M.I.; ABRAMOV, N.N.; YEROFEYEV, L.V.; RYAKHIN, V.A.; ZELENIN, A.N.; BERKMAN, I.L.

Patent certificates for Soviet inventions. Stroi. truboprov. 9 no.5: 35-36 My '64. (MIRA 17:9)

L 21647-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) WW/RM
ACC NR: AP6006549 (A) SOURCE CODE: UR/0191/65/000/011/0066/0066

AUTHOR: Kharkhardin, S. I.

49
B

ORG: none

TITLE: A general-purpose adhesion meter

SOURCE: Plasticheskiye massy, no. 11, 1965, 66

TOPIC TAGS: adhesion, adhesive bonding, static test, quality control, laminated material

ABSTRACT: The adhesion meter described here permits determination of adhesion strength by various methods not possible with existing meters. It allows the study of the transients that occur in adhesion breakdown and the dependence of adhesion strength upon the angle between laminated backings and upon a number of other factors. The weight of the adhesion meter (see Fig. 1) without the special roller device is 20 kg. Its length is 820 mm, its width 280 mm, and its height 680 mm. The measurement limit is from 0.01 to 30 kg. The measurement interval for the rate of movement of the clamps is 0.5--525 mm/min. It can be used for both research and quality control.

Card 1/2 UDC: 678.01:539:612

L 21647-66
ACC NR: AP6006549

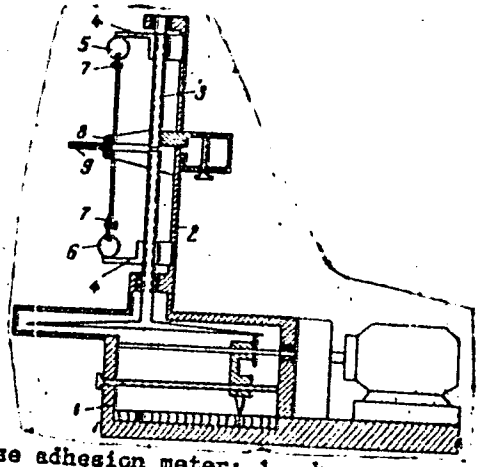


Fig. 1. General-purpose adhesion meter: 1 - base; 2 - pedestal; 3 - micrometer screw; 4 - carriage; 5 and 6 - steel rings; 7 - clamp; 8 - roller device; 9 - surfaces being laminated.

Orig. art. has: 2 diagrams.

SUB CODE: 14/ SUBM DATE: none/ ORIG REF: 001

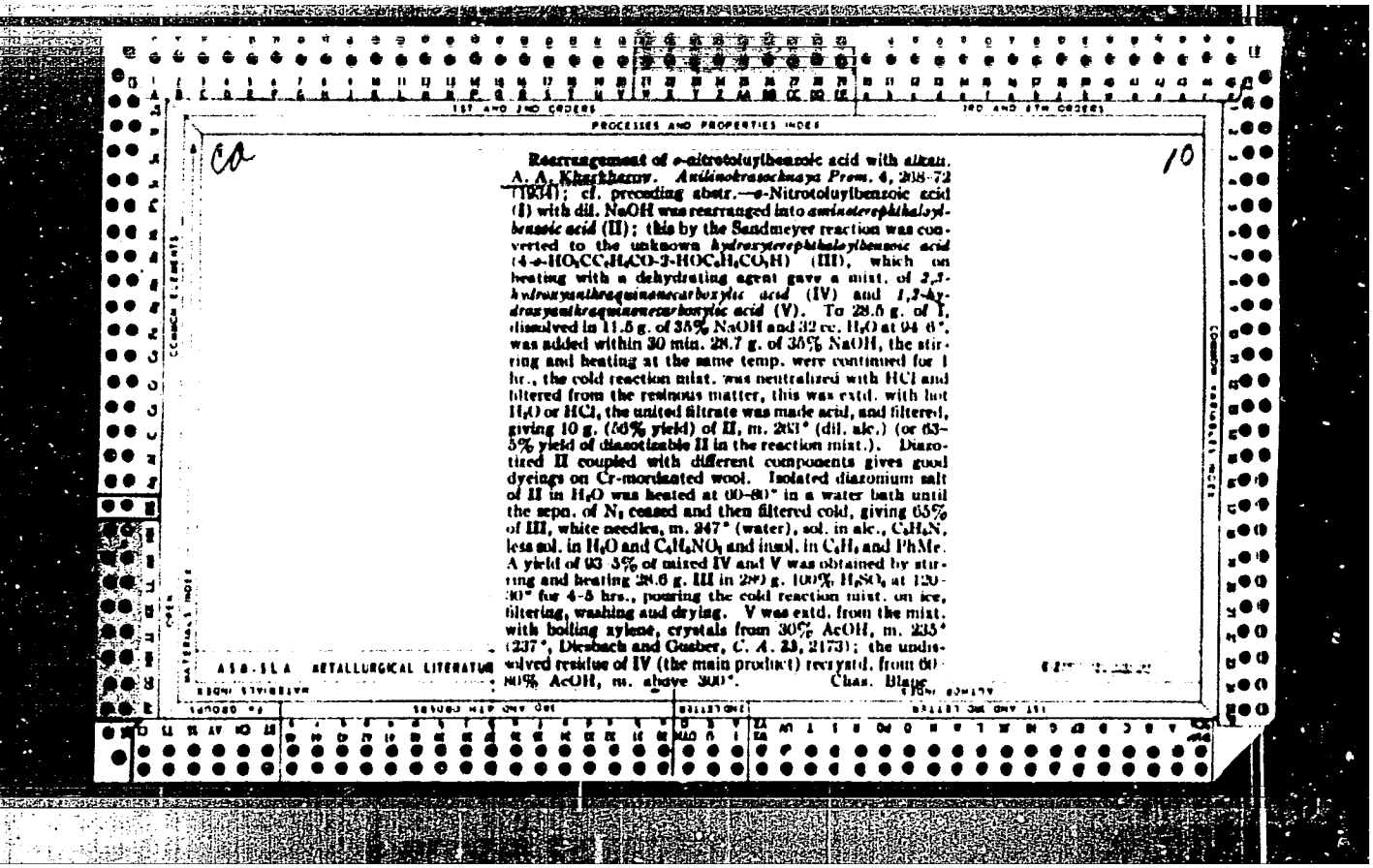
Card 2/2

MURAV'YEV, M.V. (Moskva, G-34, Lopukhinskiy per., d.6, kv. 1)
KHARKHARDINA, F.A.

History of surgery for mitral stenosis. Vest. khir. 82 no.5:137-145 My '59. (MIRA 12:7)

1. Iz kafedry obshchey khirurgii (zav. - prof. V. I. Struchkov) lechebnogo fakul'teta 1-go Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.

(MITRAL VALVE--DISEASES)



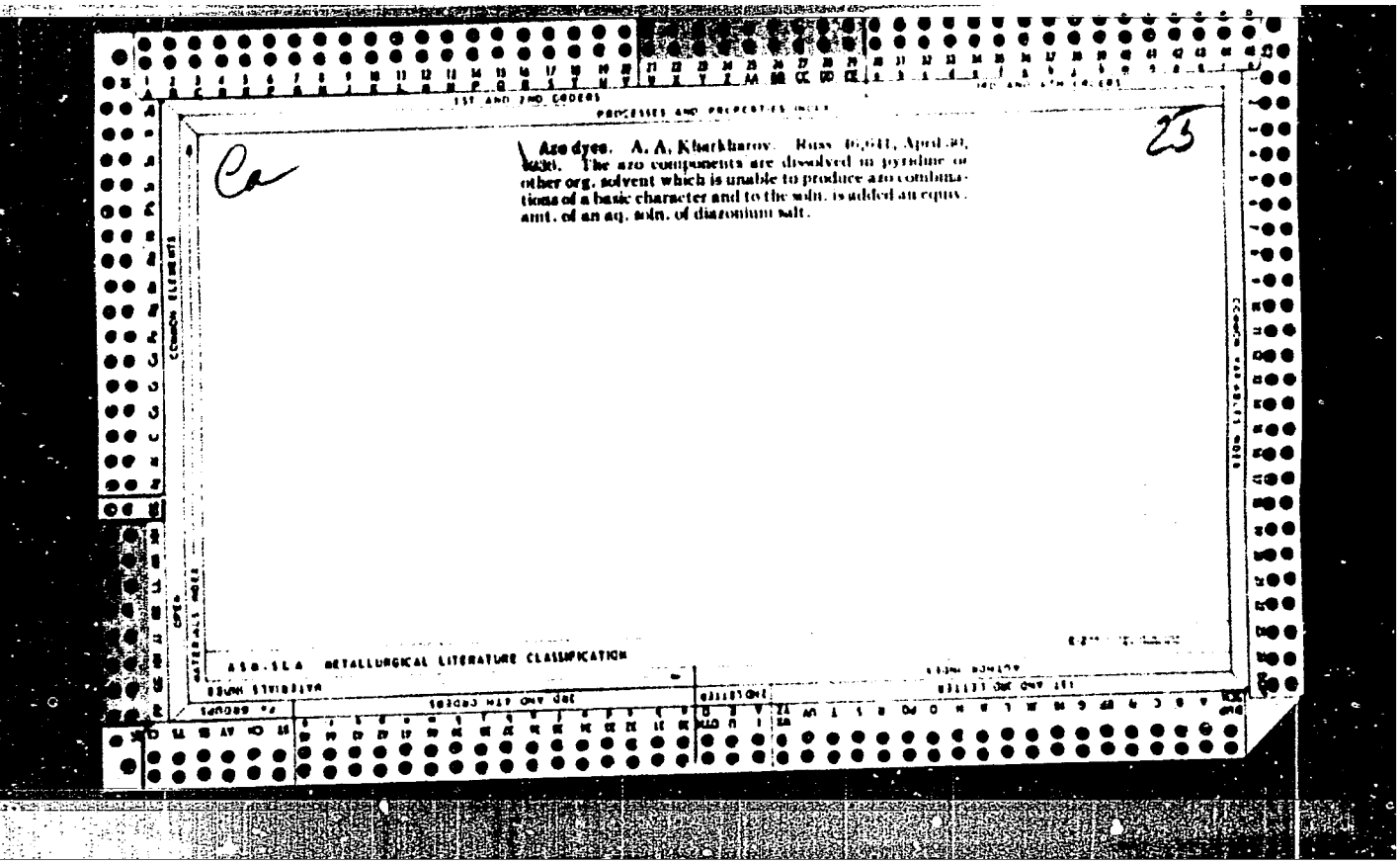
PROCESSES AND PROPERTIES INDEX

CA

10

Rearrangement of *o*-nitrotoluylbenzoic acid with alkali. A. A. Kharkharov. *Anilinokrasochnaya Prom.* 4, 268–72 (1934); cf. preceding abstr.—*o*-Nitrotoluylbenzoic acid (I) with dil. NaOH was rearranged into *aminoterephthaloylbenzoic acid* (II); this by the Sandmeyer reaction was converted to the unknown *hydroxyterephthaloylbenzoic acid* (4-*o*-$HO_2CC_6H_4CO$-3-$HOC_6H_3CO_2H$) (III), which on heating with a dehydrating agent gave a mixt. of *2,3-hydroxyanthraquinonecarboxylic acid* (IV) and *1,3-hydroxyanthraquinonecarboxylic acid* (V). To 28.6 g. of I, dissolved in 11.5 g. of 35% NaOH and 32 cc. H_2O at 94–6°, was added within 30 min. 28.7 g. of 35% NaOH, the stirring and heating at the same temp. were continued for 1 hr., the cold reaction mixt. was neutralized with HCl and filtered from the resinous matter, this was extd. with hot H_2O or HCl, the united filtrate was made acid, and filtered, giving 10 g. (50% yield) of II, m. 283° (dil. alc.) (or 63–5% yield of diazotizable II in the reaction mixt.). Diazotized II coupled with different components gives good dyeings on Cr-mordanted wool. Isolated diazonium salt of II in H_2O was heated at 60–80° in a water bath until the evpn. of N_2 ceased and then filtered cold, giving 65% of III, white needles, m. 247° (water), sol. in alc., C_5H_5N, less sol. in H_2O and $C_6H_5NO_2$ and insol. in C_6H_6 and PhMe. A yield of 93–5% of mixed IV and V was obtained by stirring and heating 28.6 g. III in 280 g. 100% H_2SO_4 at 120–30° for 4–5 hrs., pouring the cold reaction mixt. on ice, filtering, washing and drying. V was extd. from the mixt. with boiling xylene, crystals from 30% AcOH, m. 235° (237°, Diesbach and Gosber, *C. A.* **23**, 2173); the undissolved residue of IV (the main product) recrystd. from 60–80% AcOH, m. above 300°. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE

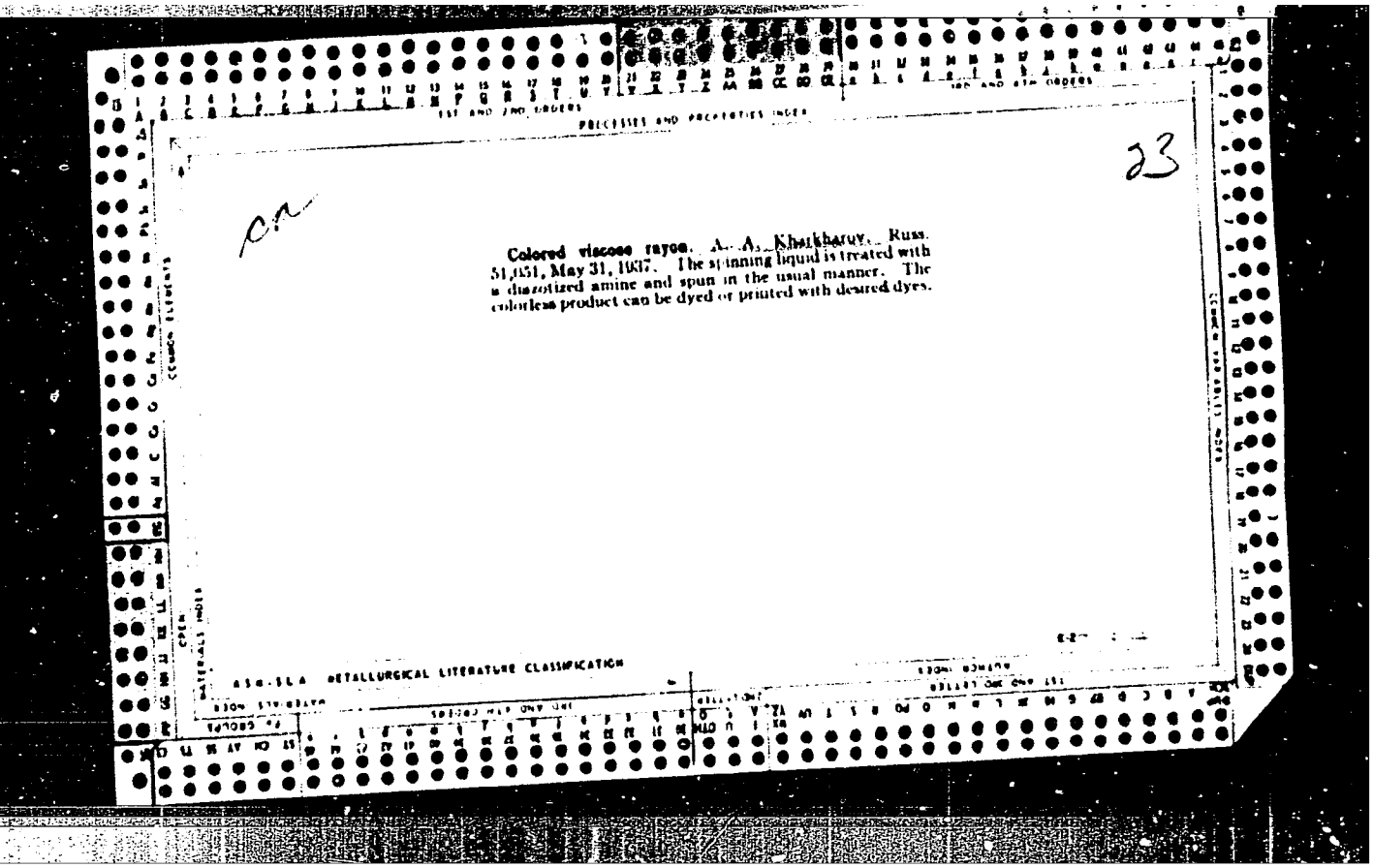


Ca

23

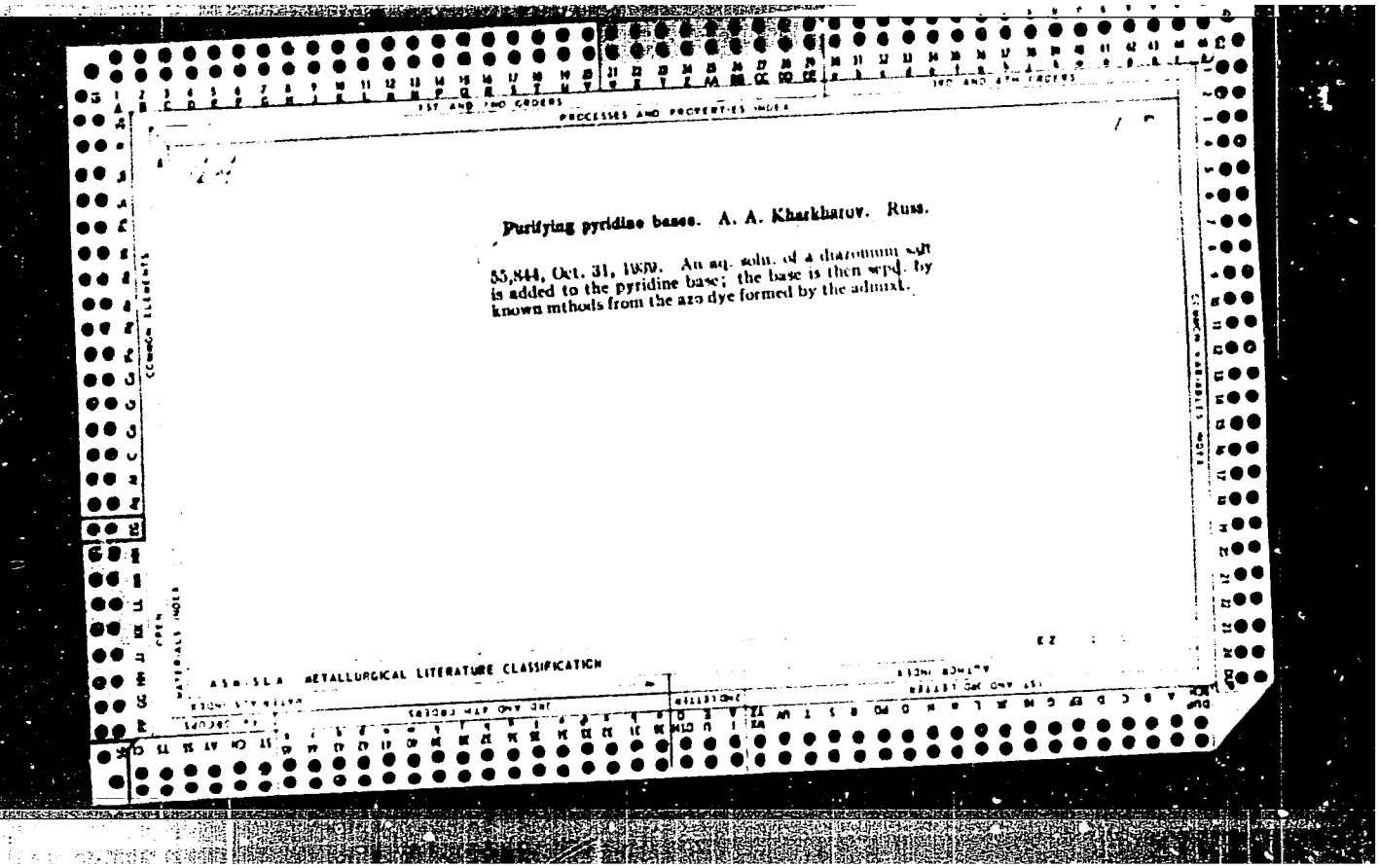
Azo dyes. A. A. Kharkharov. Russ. 69,611, April 30, 1948. The azo components are dissolved in pyridine or other org. solvent which is unable to produce azo combinations of a basic character and to the soln. is added an equiv. amt. of an aq. soln. of diazonium salt.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



23

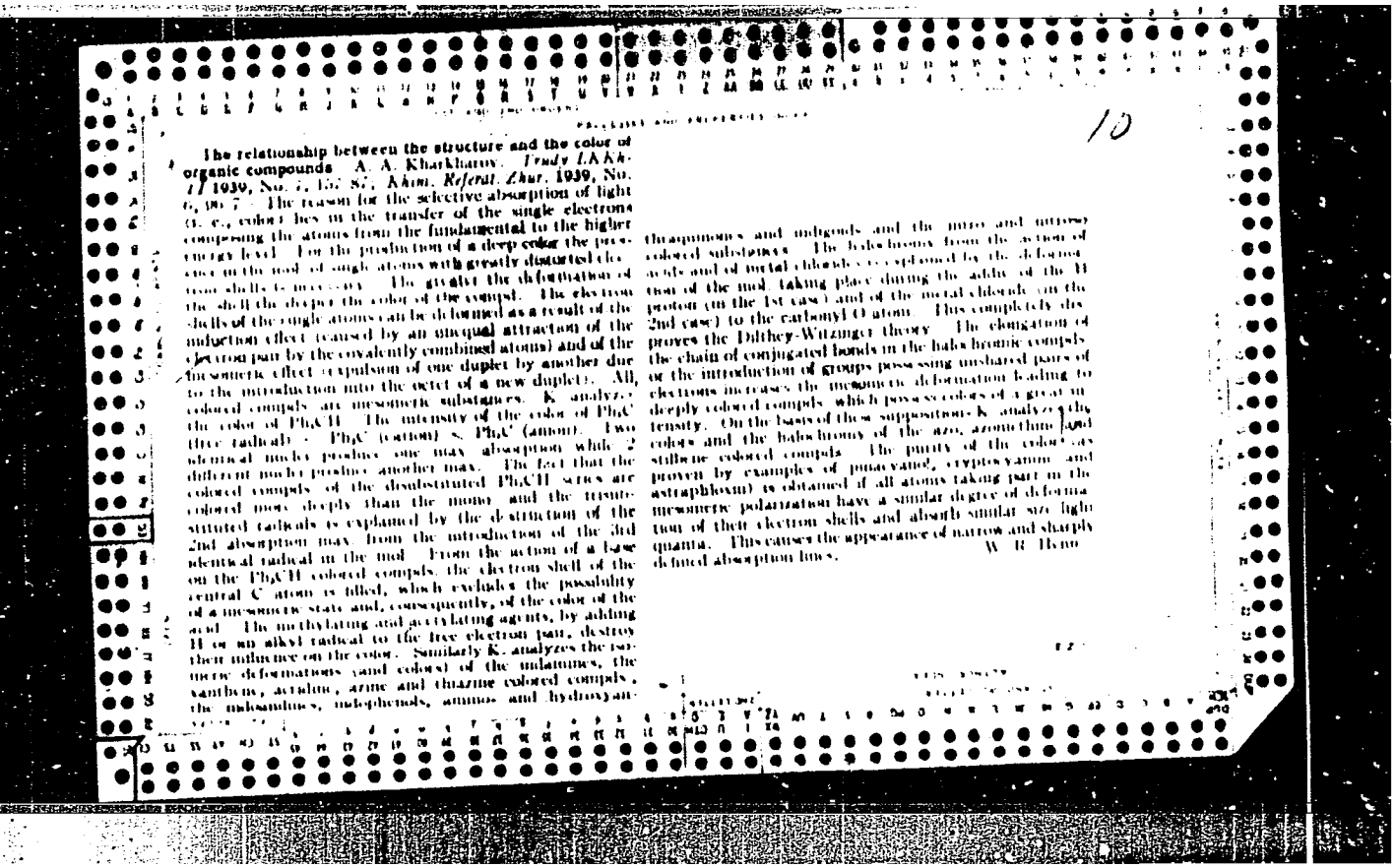
Colored viscose rayon. A. A. Khokharov. Russ. 51,051, May 31, 1937. The spinning liquid is treated with a diazotized amine and spun in the usual manner. The colorless product can be dyed or printed with desired dyes.



Purifying pyridine bases. A. A. Kharkharov. Russ.

55,844, Oct. 31, 1939. An aq. soln. of a diazonium salt is added to the pyridine base; the base is then sepd. by known mthods from the azo dye formed by the admixt.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



10

The relationship between the structure and the color of organic compounds A. A. Kharkharov. *Trudy LAKhI* 1939, No. 1, 155–87; *Khim. Referat. Zhur.* 1939, No. 6, 98–7. The reason for the selective absorption of light (i. e., color) lies in the transfer of the single electrons composing the atoms from the fundamental to the higher energy level. For the production of a deep color the presence in the mol of single atoms with greatly disturbed electron shells is necessary. The greater the deformation of the shell the deeper the color of the compd. The electron shells of the single atoms can be deformed as a result of the induction effect caused by an unequal attraction of the electron pair by the covalently combined atoms) and of the mesomeric effect (expulsion of one duplet by another due to the introduction into the octet of a new duplet). All colored compds are mesomeric substances. K. analyzes the color of Ph_3CH. The intensity of the color of Ph_3C (free radical) > Ph_3C^+ (cation) > Ph_3C^- (anion). Two identical nuclei produce one max. absorption while 2 different nuclei produce another max. The fact that the colored compds of the disubstituted Ph_2CH series are colored more deeply than the mono- and the trisubstituted radicals is explained by the destruction of the 3rd 2nd absorption max. from the introduction of the 3rd identical radical in the mol. From the action of a base on the Ph_3CH colored compds. the electron shell of the central C atom is filled, which excludes the possibility of a mesomeric state and, consequently, of the color of the acid. The methylating and acetylating agents, by adding H or an alkyl radical to the free electron pair, destroy their influence on the color. Similarly K. analyzes the isomeric deformations (and colors) of the indammines, the xanthone, acridine, azine and thiazine colored compds., the indoanilines, indophenols, ammos and hydroxyan-

thraquinones and indigoids and the nitro and nitroso colored substances. The halochromy from the action of acids and of metal chlorides is explained by the deformation of the mol. taking place during the addn of the H atom of the mol. taking place and of the metal chloride (on the proton (in the 1st case) and of the metal chloride (on the 2nd case) to the carbonyl O atom. This completely disproves the Dilthey-Witzinger theory. The elongation of the chain of conjugated bonds in the halochromic compds or the introduction of groups possessing unshared pairs of electrons increases the mesomeric deformation leading to deeply colored compds which possess colors of a great intensity. On the basis of these suppositions K. analyzes the colors and the halochromy of the azo, azomethine and stilbene colored compds. The purity of the colors (as proven by examples of pinacyanol, cryptocyanine and astraphloxin) is obtained if all atoms taking part in the mesomeric polarization have a similar degree of deformation of their electron shells and absorb similar size light quanta. This causes the appearance of narrow and sharply defined absorption lines.

W. R. Horn

1ST AND 2ND ORDERS — PROCESSES AND PROPERTIES INDEX

Tautomeric compounds. II. Azo coupling reaction and some of its special cases. A. E. Porai-Koshits and A. A. Kharkharov. *Bull. acad. sci. U.R.S.S., Classe sci. chim.* **1944**, 70-88(English summary); cf. *C.A.* **34**, 7908[9].—The authors give the theoretical bases of the azo-coupling reaction in a general case from the point of view of electronic theory. The cases of pyridine and acridine derivs. are discussed. The reaction may be considered as introduction of an unshared electron pair into the octet deficiency of N of one of the resonant forms of the diazonium cation. **III. Coupling of diazo compounds with 9-methylacridine.** *Ibid.* 143-51(English summary). 9-Methylacridine (C.A. numbering) reacts in AcOH soln. with the majority of the usual technically used diazo compds., with the exceptions of p-$H_2NC_6H_4NHPh$ and p-$H_2NC_6H_4NMe_2$, as well as trinitroaniline. The products are, apparently, the result of coupling to the Me group of the methylacridine. Since the tautomeric forms of these compds. should be identical with the corresponding hydrazones of 9-acridal (9-aldehyde of acridine), the hydrazones were prepd. and found to be identical with the diazo derivs. in phys. and chem. properties. Following are the m.ps. and colors of the diazo compds. prepd. from 9-methylacridine (listing only the amine used for prepn. of the diazonium compd.): 2,4-$(NO_2)_2C_6H_3NH_2$, m. 235°, yellow; *o-nitroaniline*, m. 191°, yellow; *m-nitroaniline*, m. 251°, red-orange; *p-nitroaniline*, m. 232°, yellow; anthranilic acid, m. 256°, green-black; m-$NH_2C_6H_4CO_2H$, m. 244°, green-black; p-$NH_2C_6H_4CO_2H$, m. 254°, green-black; *sulfanilic acid*, does not m., dark red; p-$ClC_6H_4NH_2$, m. 221°, yellow; $PhNH_2$, m. 215°, yellow; p-$IC_6H_4NH_2$, m. 190°, dark red; *o-toluidine*, m. 122°, yellow; *m-toluidine*, m. 180°, red-yellow; *p-toluidine*, m. 191°, red-yellow; *o-anisidine*, m. 107°, red; *p-anisidine*, m. 182°, dark red; *m-xylidine*, m. 180°, deep red; *p-aminophenol*, m. 107°, deep red. These compds. have the power to dye wool, although their aging stability is rather poor. **IV. Syntheses and properties of azo dyes from 9-methylacridine (arylhydrazones of 9-acridinecarboxaldehyde).** *Ibid.* 243-51. 9-Methylacridine (I) was prepd. as follows: 30 g. Ph_2NH, 35 g. dry $ZnCl_2$ and 28 cc. AcOH were heated for 4.5-5 hrs., the AcOH was distd. off by heating the mass to 250°, and the heating was continued for 0.6 hr. at 250-65°; on cooling the product was extd. with hot 3% H_2SO_4 and pptd. by excess of NH_4OH; yield 70%, m. 94-6°. Diazotizations of $PhNH_2$, o-, m-, p-nitroaniline, o-, m-, p-aminobenzoic acids, sulfanilic acid, o-, m-, p-toluidines, o- and p-anisidines, m-xylidine and p-aminophenol were conducted in the usually accepted manner; the diazonium compds. were coupled with I in AcOH soln. as follows: 5 g. I in 100-20 cc. AcOH was treated with 20 g. powd. dry NaOAc followed by the diazonium soln. added dropwise with stirring. The pptd.

Lab. Dyestuffs, Leningrad Chem.-Tech. Inst.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

dyestuff is filtered off 4–5 times during the procedure. The m.ps. and properties of these products are listed in Part III. In order to establish the identity in structure of these compds. with the tautomeric compds.: hydrazones of acridinecarboxaldehyde (II), these were prepd. according to the following typical procedure: 1.2 g. $PhNHNH_2$ and 100 cc. 1% HCl was treated with 2.1 g. II and after stirring for 2 hrs. and heating at 40–50° for 1 hr. the ppte. HCl salt of the phenylhydrazone of II was filtered off; m. 194°, free base (from alc. soln. by addn. of NH_4OH), m. 215°; identical with the diazo compd. from I and PhN_2Cl, shown by mixed m.p. and identical absorption spectra. Absorption spectra of the compds. are presented. Reduction of the azo compds. with Na hydrosulfite readily yielded *9-(aminomethyl)acridine*, m. 151°; *Hg deriv.*, m. 118° (from EtOH). The azo compds. in 80% AcOH in presence of NaOAc were treated with a soln. of PhN_2Cl; in all cases on standing there was developed an identical orange-red color, the cause of which was not studied further. Phosphotungstic acid ppts. the dyes in the form of completely insol. bluish solids.

G. M. Kosolapoff

KHARKHAROV, A.A.

(2)

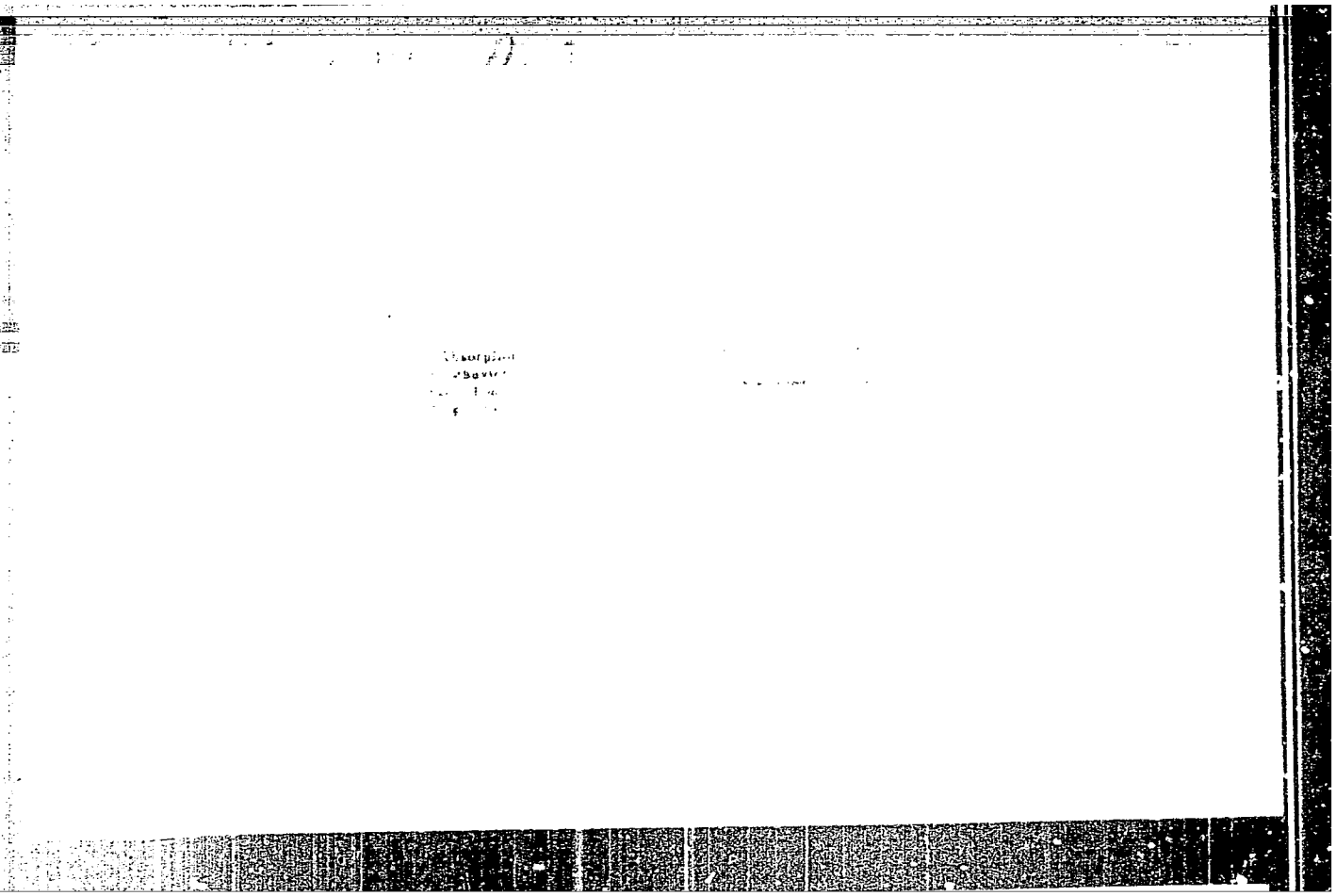
Printing of cotton with nitrosamine dyes using a neutral developer. D. N. Griboedov and A. A. Kharkharov. *Tekstil. Prom.* 10, No. 3, 20-2(1950).—Widely spread use of insol. azo dyes for printing cotton requires 2 operations; dipping in Azotol and printing with the thickened azo compds., while only 1 operation is necessary with nitrosamine dyes (I). The influence of the substituent and of its position in the original amine on the ease of prepn. of I is discussed in detail. I prepd. from *o*- and *p*-nitroaniline, nitro-*o*-anisidine, *p*-nitro-*o*-toluidine 2,5-dichloronitrobenzene, 5-nitro-*o*-anisidine, 1-naphthylamine, benzidine sulfate, and dianisidine, with the exception of the last 3, were found suitable for coupling in acid or neutral developers.

Elizabeth Barabash

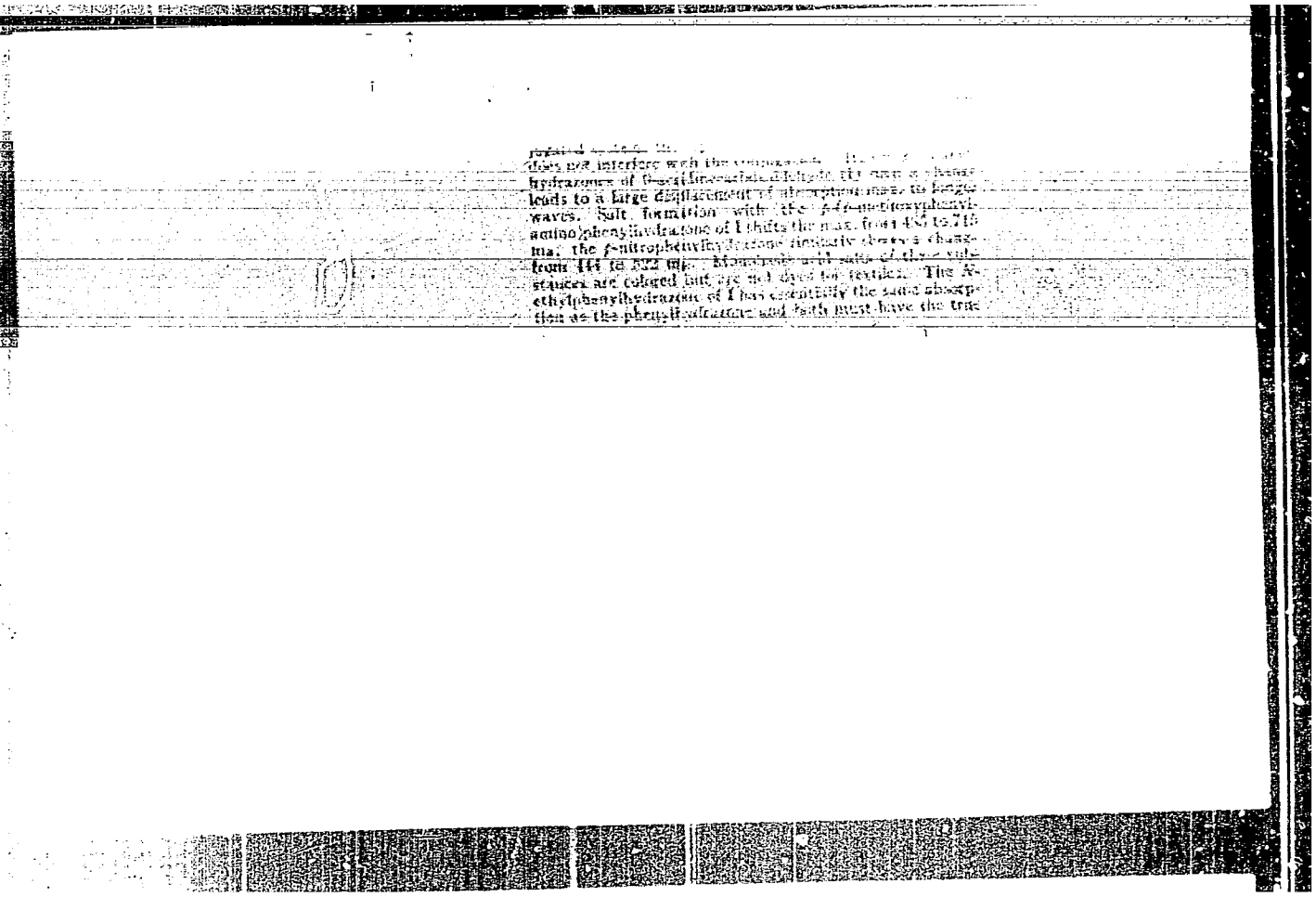
KHARKHAROV, A.A.

Interaction between substances with active methyl groups and diazo compounds. Zhur.ob.khim. 23 no.7:1175-1181 Jl '53. (MLRA 6:7)

1. Laboratoriya khimicheskoy tekhnologii voloknistykh materialov Leningradskogo tekstil'nogo instituta imeni S.M.Kirova.
(Methyl) (Diazo compounds)



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820013-7"

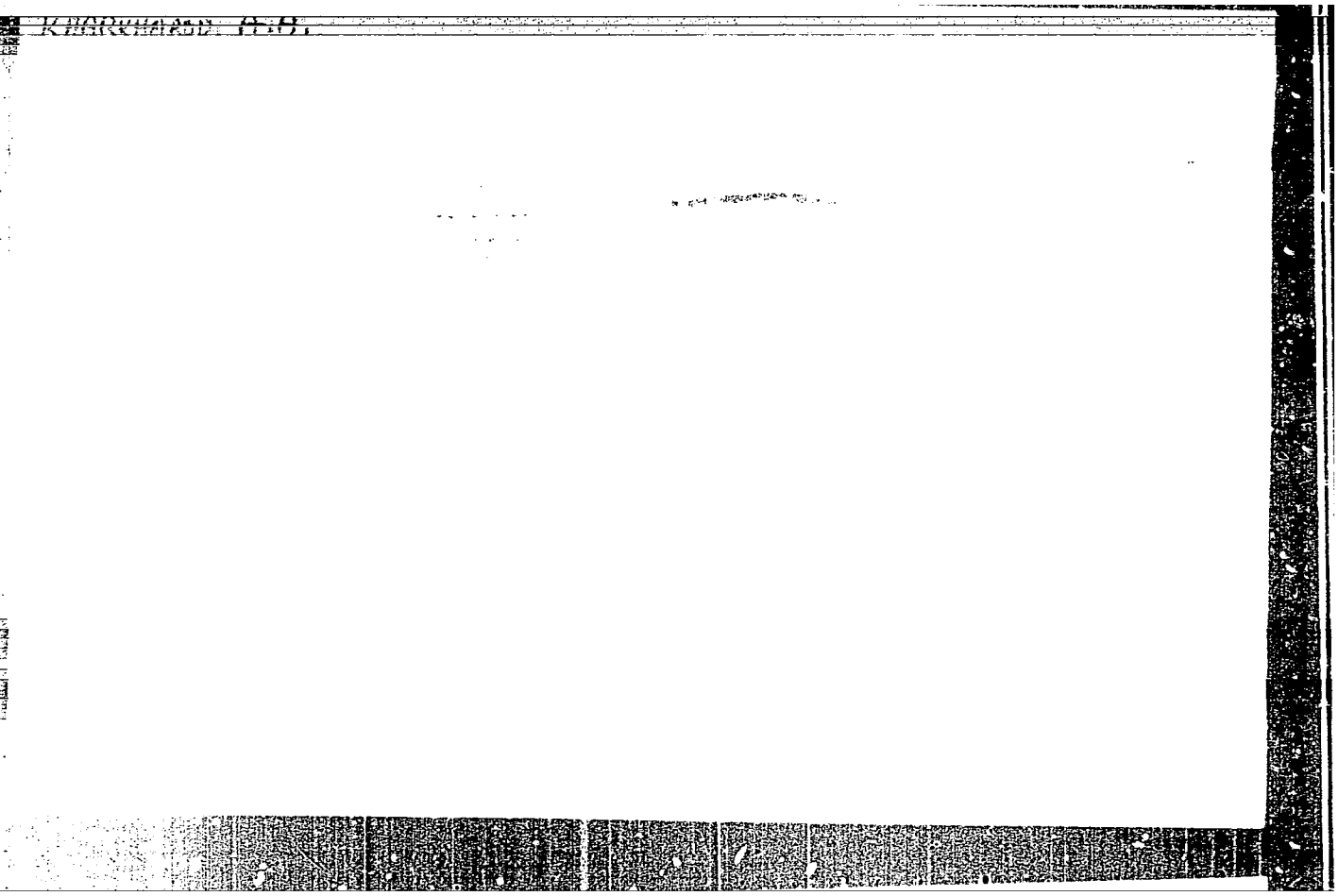


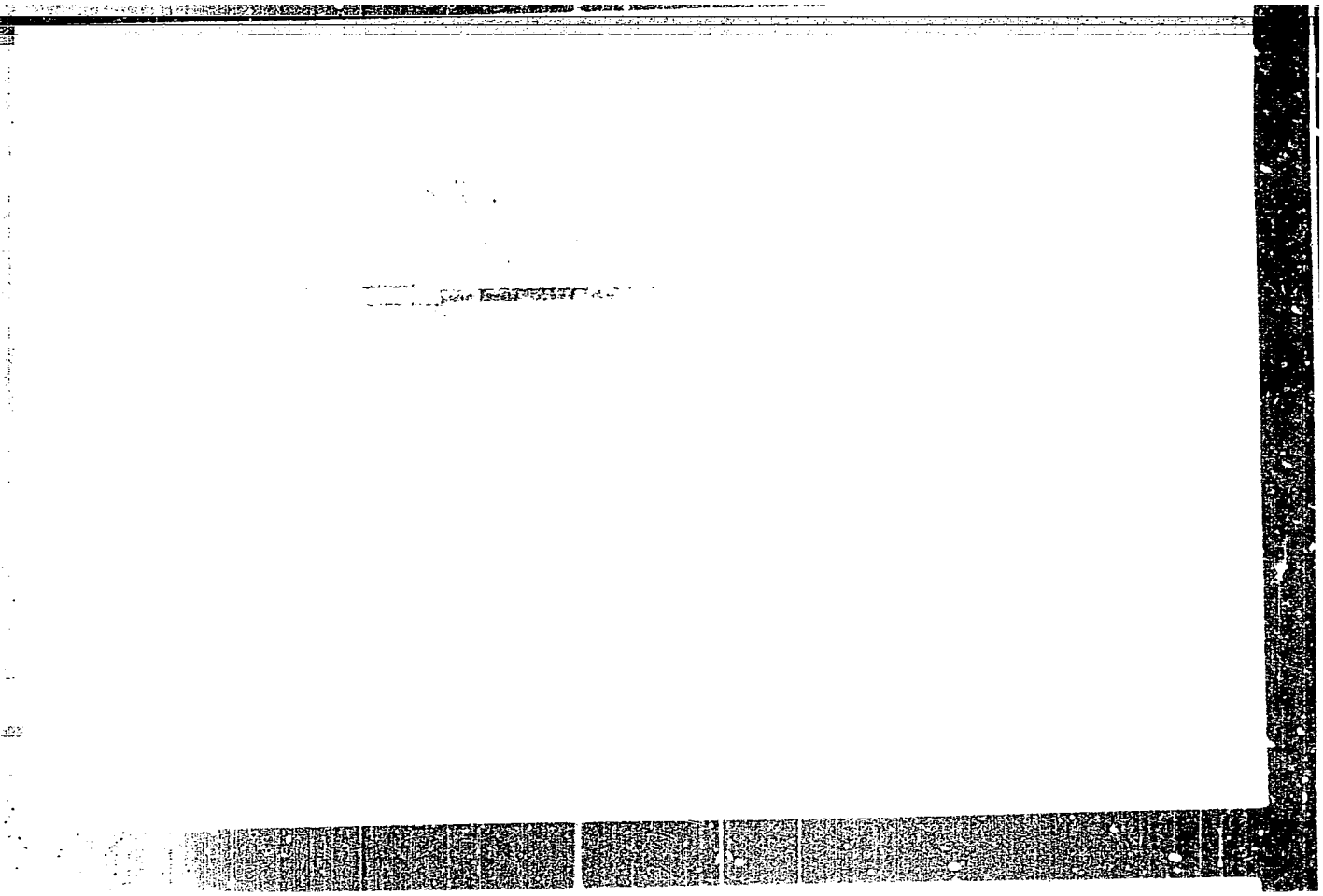
KHARKHAROV, A.A.

3

Absorption spectra and structure of molecules. II. Spectral study of alcoholic solutions of chloro derivatives of aniline. A. A. Kharkh[illegible] ... 1954 ...

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820013-7"

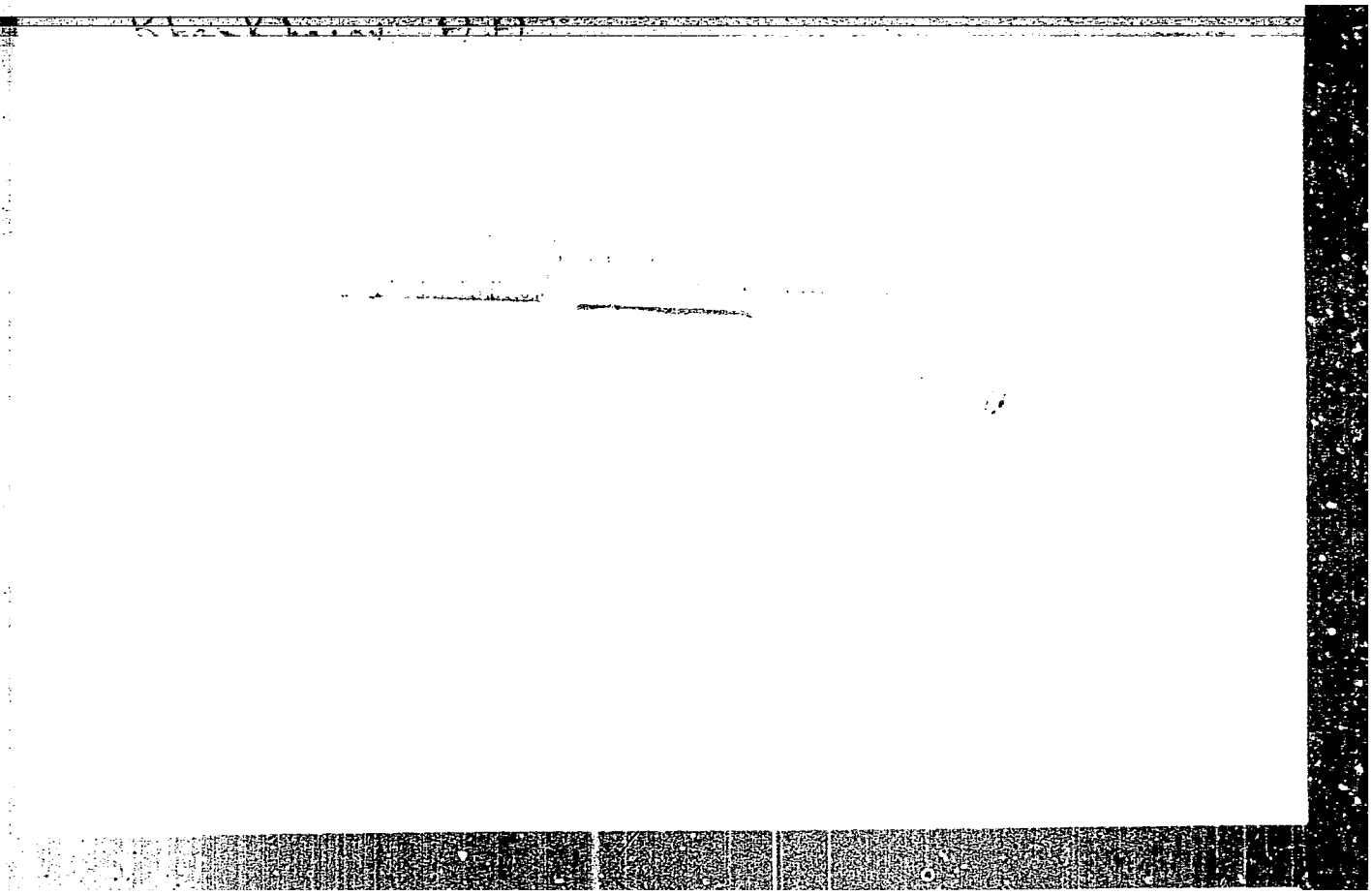




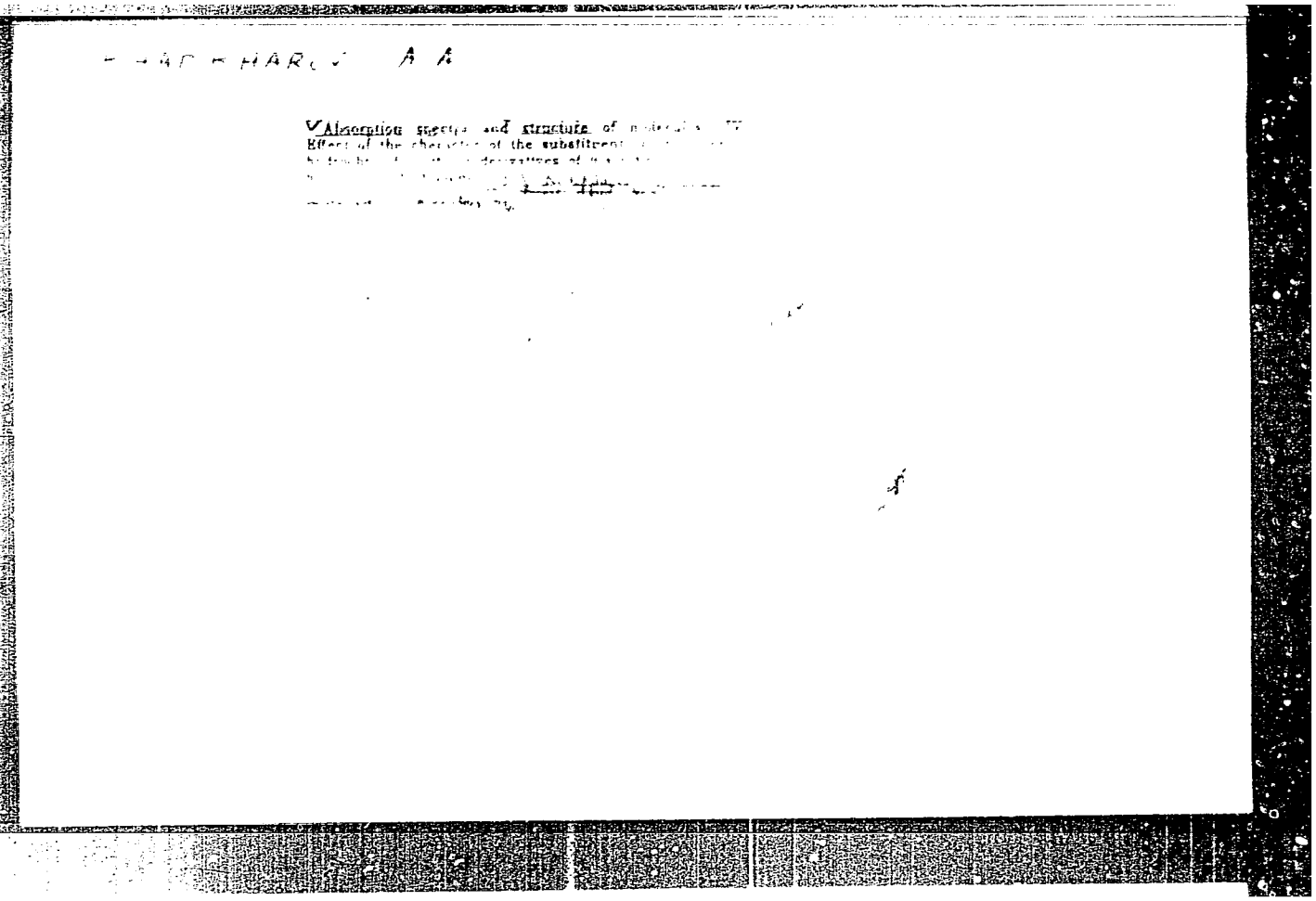
APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820013-7"

KHARKHAROV, Aleksandr Aleksandrovich (Leningrad Textile Inst imeni Kirov) awarded sci degree of Doc Chem Sci for the 28 Oct 57 defense of dissertation: "Acquisition of new azo dyes and research on the dependence between their colors and their structure" at the Council, Leningrad State Univ imeni Zhdanov; Prot No 12, 17 May 58.

(BMVO, 10-58,23-24)



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820013-7"



KharKharov, A.A.

USSR/ Chemistry - Organic dyes

Card [illegible] Pub. 40 - 18/26

Authors : Kharkharov, A. A.

Title : Absorption spectra and structure of molecules. Part [illegible] Modern electron [illegible]

Periodical : [illegible]

Abstract : It is shown on the basis of the electron theory and on the basis of actual [illegible]

Submitted : April [illegible], 1954

KHARKHAROV, A.A.

Absorption wpectra and molecular structure. Part 5. The spectral investigation of the alcohol-hydrochloride solutions of chlorine derivatives of the hydrochloride of phenyl hydrazone-9-acridyl aldehyde. Izv.AN SSSR.Otd.khim.nauk 86 no.6:1071-1077 My '55.: (Chlorine compounds--Spectra)(Acridyl aldehyde) (MIRA 9:4)

KHARKHAROV, A. A. Doc Chem Sci -- (diss) "The Obtainment of New Azo Dyes and a Study of the Relationship Between Their Color and Structure." Len, 1957. 33 pp 20 cm. (Len Order of Lenin State Univ im A. A. Zhdanov), 150 copies (KL, 28-57, 109)

KHARKHAROV, A.A.

Relation between the structure and the coloring of organic compounds. Part 7. Determining the structure of azo dyes [with summary in English, p.154]. Vest. Len. un. 12 no.4:145-150 '57. (MLRA 10:4)
(Azo compounds)

KHARKHAROV, A.A.

54-4-20/20

AUTHOR: Kharkharov, A. A.

TITLE: On the Question of the Connection Between the Composition and the Color of Organic Compounds. VIII. On Indicatory Properties of Some Arylhydrozones of the 9-Acridile Aldehyde. Provisional Report (K voprosu o svyazi mezhdu stroyeniyem i tsvetom organicheskikh soyedineniy. VIII. Ob indikatornykh svoystvakh nekotorykh arilgidrazonov-9-akridilovogo al'degida - Predvaritel'noye soobshcheniye).

PERIODICAL: Vestnik Leningradskogo Universiteta Seriya Fiziki i Khimii, 1957, Vol. 22, Nr 4, pp. 169-172 (USSR).

ABSTRACT: It is found out, that the yellow-orange colored above mentioned compounds pass over at an interval of p_H 2 to 6 into their red-green salts. The brown and yellow arylhydrazones, which contain neither carboxylid nor sulpho, nor nitro-groups, are able to form violet salts with wool-cerargyrite or silk-fibroin. This reaction is ment to prove the statements of the chemical theory on the dyeing of natural fibers by basic coloring matters and is ment to demonstrate, that the dyeing of polyamide fibers is closely connected with the reaction with acetyl-cellulose.
There are 1 table, and 5 Slavic references.

SUBMITTED: March 15, 1957.
AVAILABLE: Library of Congress.
Card 1/1

KHARKHAROV, A.A.; KHARKHAROVA, G.M.

Dyeing of synthetic fibers. Izv. vys. ucheb. zav.; tekh. tekst. prom. no. 3:122-124 '58. (MIRA 11:7)

1. Leningradskiy tekstil'nyy institut.
(Dyes and dyeing--Textile fibers, Synthetic)

KHARKHAROV, A.A.; ANDROSOV, V.F.

"Chemistry of dyestuffs" B. M. Bogoslovskii, N.G. Laptova. Reviewed by A.A. Kharkharov, V.F. Androsov. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.5:146-147 '58. (MIRA 11:12)

1.Leningradskiy tekstil'nyy institut imeni S.M. Kirova.
(Dyes and dyeing--Chemistry)

ANDROSOV, V.F.; KHARKHAROV, A.A.

Dyeing synthetic fibers. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.6:62-65 '58. (MIRA 12:4)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Dyes and dyeing--Nylon)

Khardikov, A. A.

"Investigations in the Field of Dyeing Synthetic Fibers (nitron and lavsan) with Soluble and Insoluble Dyestuffs."

report presented at the Section on Colloid Chemistry, VIII Mendeleyev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959.
(Koll. Zhur. v. 21, No. 4, pp. 509-511)

KHARKHAROV, A.A.; ARESTOVA, G.A.

Dyeing synthetic fibers. Report No.3. Izv.vys.ucheb.zav.; tekh. tekst.prom. no.1:137-140 '59. (MIRA 12:6)

1. Leningradskiy tekstil'nyy institut im. S.M. Kirova.
(Dyes and dyeing--Nylon)
(Textile fibers, Synthetic--Testing)

ANDROSOV, V.F.; KHARKHAROV, A.A.

Dyeing of synthetic fibers. Report no.4. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.2:110-115 '59. (MIRA 12:6)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Dyes and dyeing--Nylon)

KHARKHAROV, A.A.; ANDROSOV, V.F.

Dyeing of synthetic fibers. Report No.5. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.4:115-120 '59. (MIRA 12:11)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Dyes and dyeing--Nylon) (Textile fibers, Synthetic)

KHARKHAROV, A.A.;ANDROSOV, V.F.

Seventieth anniversary of the birth of Professor D.N. Griboedov.
Izv. vys. ucheb. zav.; tekh. tekst. prom. no.5:135-138 '59 (MIRA 13:3)

1. Leningradskiy tekstil'nyy institut im. S.M. Kirova.
(Griboedov, Dimitrii Nikolaevich, 1889-1956)

ROSKIN, Ye.S.; KHARKHAROV, A.A.; FEL', V.S.

Dyeing of synthetic fibers. Report No.7. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.6:104-106 '59. (MIRA 13:4)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Dyes and dyeing--Chemistry) (Orlon)

5(3)

SOV/79-29-9-51/76

AUTHORS: Kharkharov, A. A., Kharkharova, G. M.

TITLE: Absorption Spectra and Structure of the Molecules. VI. Colors of the Hydrochloric Salts of the Arylhydrazones of 9-Acridyl Aldehyde Containing Residues of Condensed Cycles and Residues of Heterocycles

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3042-3048 (USSR)

ABSTRACT: As was found already earlier (Ref 1) the color, i.e. the position of the main maximum and the intensity of the absorption of the organic compounds depends on the amount of the interacting π-electrons and on the total shift of the electron density in the molecule. These rules hold also for conjugate systems interrupted by an imine group and especially for the hydrochlorides of the arylhydrazones of 9-acridyl aldehyde investigated in the present paper. The introduction of the condensed cycles and residues of the heterocycles into this system instead of the phenyl residue confirms again the above mentioned rule (Figs 1-5, Table). Proceeding from the hydrochlorides of phenyl- and naphthyl hydrazones of 9-acridyl aldehyde it was

Card 1/3

Absorption Spectra and Structure of the Molecules. VI. Colors of the Hydrochloric Salts of the Arylhydrazones of 9-Acridyl Aldehyde Containing Residues of Condensed Cycles and Residues of Heterocycles

demonstrated that the multiplication of the interacting π-electrons in the conjugate systems interrupted by the imine group as well as in the normal conjugate systems is accompanied by an intensification of color. On the basis of the investigation of the hydrochlorides of phenyl-, naphthyl-, acenaphthenyl-, and carbazolyl hydrazones of 9-acridyl aldehyde it was found that the increase of the total shift of the electron density in the molecule from the radical R to the acridinium nitrogen H-N^{+}= is accompanied by a further intensification of color. Proceeding from the hydrochlorides of phenyl-, benzimidazolyl anthraquinonyl- and other hydrazones of 9-acridyl aldehyde it was shown that the bathochromic effect of the multiplication of interacting π-electrons may be suppressed by the hypsochromic influence of an electrophilic radical via under the reduction of the total shift of the electron density in the molecule; in the given case, from the radical to the acridinium nitrogen. The change in the radical structure which is connected with the imine group in the hydrochloric salts of the hydrazones of 9-acridyl aldehyde changes only little the

Absorption Spectra and Structure of the Molecules. VI. Colors of the Hydrochloric Salts of the Arylhydrazones of 9-Acridyl Aldehyde Containing Residues of Condensed Cycles and Residues of Heterocycles

total shape of the curve, the position and the short-wave maxima and the relative distribution of the intensity of the absorption bands. The structure of the dyes obtained was confirmed by the similarity of their spectral curves with those of the phenyl hydrazones of 9-acridyl aldehyde, which had been accurately investigated already earlier, and by elementary analysis. There are 5 figures, 1 table, and 5 Soviet references.

ASSOCIATION: Leningradskiy tekstil'nyy institut (Leningrad Textile Institute)

SUBMITTED: January 12, 1958

KHARKHAROV, A.A., doktor khimicheskikh nauk, prof. ; KALONTAROV, I.Ya., inzh.

Use of active dyes for dyeing nylon knitted fabrics. Izv.vys.ucheb. zav.; tekh.leg.prom. no.5:102-108 '60. (MIRA 13:11)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova. Rekomendovana kafedroy khimicheskoy tekhnologii volokhistykh materialov.
(Dyes and dyeing--Nylon) (Knit goods)

KHARKHAROV, Aleksandr Aleksandrovich, doktor khim.nauk; STARIKOVICH, Yevgeniya Yefimovna, inzh.; YEMEL'YANOVA, Ye.V., red.; TIKHONOVA, I.M., tekhn.red.

[Dyeing of synthetic fibers] Krashenie sinteticheskikh volokon. Leningrad, Lenizdat, 1960. 93 p. (MIRA 13:12)
(Dyes and dyeing--Textile fibers, Synthetic)

ANDROSOV, V.F.; KHARKHAROV, A.A.

Effect of sonic and ultrasonic oscillations on certain textile finishing processes. Izv.vys.ucheb.zav.; tekh. tekst.prom. no.1:129-136 '60. (MIRA 13:6)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Textile finishing)
(Ultrasonic waves—Industrial applications)

KHARKHAROV, A.A., STARIKOVICH, Ye.Ye.

Dyeing synthetic fibers. Report No.9: Dyeing nylon with metal-containing acid dyes. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.3:106-112 '60. (MIRA 13:7)

1. Leningradskiy tekstil'nyy institut im. S.M. Kirova.
(Dyes and dying--Nylon)

KHARKHAROV, A.A.; STARIKOVICH, Ye.Ye.

Dyeing of synthetic fibers; investigating the interaction of capron with acid metal-containing dyes. Report No.10. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.4:117-124 '60. (MIRA 13:9)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Dyes and dyeing--Nylon)

KHARKHAROV, A.A., doktor khimicheskikh nauk, prof.; STARIKOVICH, Ye.Ye., inzh.

Dyeing nylon fabrics and elastic with disperse metallized dyes. Izv.vys.ucheb.zav.; tekh.leg.prom. no.4:121-129 '60. (MIRA 13:10)

1. Leningradskiy tekstil'nyy institut imeni. S.M.Kirova. Rekomendovana kafedroy khimicheskoy tekhnologii voloknistykh materialov.
(Dyes and dyeing--Nylon)

Z/011/61/018/002/012/013
E112/E153

AUTHORS: Androsov, V.F., and Kharkharov, A.A.

TITLE: The dyeing of synthetic fibers

PERIODICAL: Chemie a chemická technologie. Přehled technické a hospodářské literatury. Vol.18, No.2, 1961, page 98. Abstract Ch 61-1341 (Izv. VUZ., Seriya Technol. tekst. prom., 1960, No.2, pp.97-100).

TEXT: The diffusion coefficients of two leuco-esters of vat dyestuffs in the dyeing of polyamide fibers of the Kapron type were determined. Rate of diffusion is increased by the addition of dispersing agents until a maximum is reached, after which the rate of diffusion falls off. The addition of surfactant OP-10 increases the rate of dyeing with vat colours of Kapron and wool fibers. 3 tables, 9 lit.references.

[Abstractor's note: This is a complete translation.]

Card 1/1

KHARKHAROV, A.A., prof.; VOROB'YEV, P.A.

"Finishing of textile fabrics" by F.I.Sadov, M.V.Korchagin. Reviewed by A.A.Kharkharov, P.A.Vorob'ev. Tekst. prom. 20 no. 12:80-81 D '60. (MIRA 13:12)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova (for Kharkharov). 2. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo instituta tekstil'nogo i legkogo mashinostroyeniya.

(Sadov, F.I.) (Textile finishing) (Korchagin,M.V.)

KHARKHAROV, A.A.; FEL', V.S.

Dyeing of synthetic fibers. Report No.12: Studying the dyeing of "lavsan" with on-the-fiber developing, in water-insoluble azo dyes. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.5:105-112 '61.
(MIRA 14:11)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova.
(Dyes and dyeing—Textile fibers, Synthetic)

KHARKHAROV, A.A.; TSVETKOVA, V.V.

Review of the preparation and dyeing methods of "vinol" polyvinylalcohol fibers. Izv.vys.ucheb.zav.; tekh.tekst. prom. no.5:150-152 '61. (MIRA 14:11)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova.
(Dyes and dyeing--Textile fibers, Synthetic)

KHARKHAROV, A.A.; KALONTAROV, I.Ya.

Dyeing natural silk fabrics with acid metallized dyes. Tekst. prom. 21 no. 4:50-51 Ap '61. (MIRA 14:7)
(Dyes and dyeing—Silk)

S/076/61/035/001/001/022
B004/B060

AUTHORS: Kharkharov, A. A. and Ivanova, N. V. (Leningrad)

TITLE: Dyeing of synthetic fibers. Spectroscopic study of the character of interaction of simplest amino azo dyes with polyamide fibers

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 1, 1961, 15 - 19

TEXT: The authors were concerned with the problem of the fast dyeing of polyamide fibers. For this purpose they studied the interaction between simple amino azo dyes and polyamide fibers (caprone). Spectra of dyes dissolved in organic solvents were compared with the spectrum of the diffuse reflection of the dye adsorbed on the fiber. The СФ-4 (SF-4) spectrograph used for the purpose featured an attachment for diffuse reflection, as designed by A. S. Toporets. In accordance with Refs. 2,3, the equation

$$(1 - R_1)^2/2R_1 - (1 - R_2)^2/2R_2 = kc/S$$

was applied to determine the absorption spectra on the basis of the spectra of diffuse reflection. R_1, R_2 are the reflection coefficients of the

Card 1/4

dyed and of the undyed tissue, respectively: k is the molecular coefficient of absorption; c is the concentration of the dye upon the fiber; S is the dispersion coefficient. The dyes concerned are tabulated along with their absorption maxima in the solution and on the fiber. All of the dyes displayed a bathochromic shift of the maximum by 20 mμ on the fiber compared with the maximum in solution. Since, however, the character of the spectral curve did not change, it was inferred that no salt formed from a fiber/dye reaction. This was confirmed by the ready washability of the dye with anhydrous solvents. The spectral curves of the extracted dyes were not found to change. A study of the absorption spectra of solutions containing acids and amino azo dyes in equimolecular amounts confirmed that salt is formed only if there is an excess of strong acids. The proton then adds to the azo group. A bathochromic shift by 100-110 mμ takes place. The measurement of the absorption spectrum of p-dimethyl amino azo benzene applied to caprone, terylene, natural silk, and acetate silk yielded spectral curves coinciding with the absorption maximum at 426 mμ. This again led to the conclusion that no salt was formed. The dyes that were examined were bound to the fiber by sorption forces only. The coincidence of the absorption spectrum of p-dimethyl amino azo

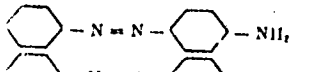
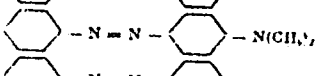
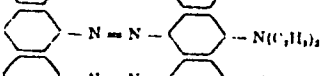
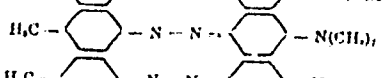
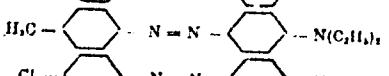
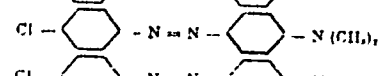
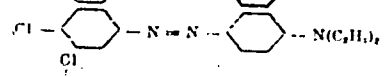
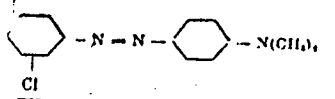
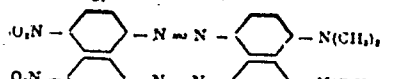
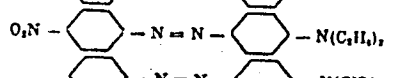
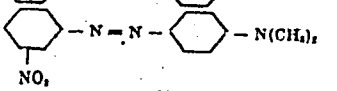
benzene, dissolved in formamide and in dimethyl formamide, also excluded the formation of H bonds. Summing up: The interaction between amino azo dyes and polyamide fibers takes place by way of the intermolecular interaction of π-electrons. Only these, together with the polarity of the carbamide group, can explain the bathochromic shift. Professor M. V. Savost'yanova is thanked for interest and assistance. There are 4 figures, 1 table, and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Tekstil'nyy institut (Textile Institute)

SUBMITTED: March 16, 1959

Legend to the Table. a) formula for dye structure; b) absorption maximum in solution; c) absorption maximum on fiber.

Dyei

а/ Структурная формула красителя	Положение максимума поглощения в растворе, б/ mμ	Положение максимума поглощения на волокне, в/ mμ
	376	396
	410	426
	416	436
	406	426
	412	432
	416	436
	425	445
	420	440
	470	490
	490	510
	435	455

Card 4/4

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Dyeing of synthetic fibers. ...

KHARKHOV, A.A., prof.; POKROVSKAYA, G.A., nauchnyy sotrudnik

Monotone dyeing of fabrics made from synthetic fibers with direct light fast dyes. Tekst.prom. 22 no.1:60-62 Ja '62. (MIRA 15:2)

1. Leningradskiy tekstil'nyy institut.
(Dyes and dyeing) (Synthetic fabrics)

KHARKHAROV, A.A.; STARIKOVICH, Ye.Ye.

Dyeing of synthetic fibers; interaction of nylon with acid metallized dyes. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.1:98-105 '62. (MIRA 15:3)

1. Leningradskiy tekstil'nyy institut im. S.M.Kirova.
(Dyes and dyeing--Nylon)

BEL'TSOV, V.M.; KHARKHAROV, A.A.; Prinimali uchastiye: PROKOF'YEVA, G.V.; UDYANSKAYA, A.A.

Use of sodium chlorite for bleaching. Izv. vys.ucheb.zav.; tekh.-tekst.prom. no.6:108-113 '61. (MIRA 15:1)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Bleaching materials)

KALONTAROV, I.Ya., inzh.; KHARKHAROV, A.A., doktor khimicheskikh nauk, prof.

Reaction of active dichlorotriazine dyes with capron fibers. Report No.2. Izv.vys.ucheb.zav.; tekh.leg.prom. 3:38-42 '62. (MIRA 15:6)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova. Rekomendovana kafedroy khimicheskoy tekhnologii voloknistykh materialov.

(Dyes and dyeing—Nylon)

KOVZHIN, L. A.; KHARKHAROV, A. A.

Analysis of active vinylsulfonic dyes by means of paper chromatography. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4:84-88 '62. (MIRA 15:10)

1. Leningradskiy tekstil'nyy institut imeni Kirova.

(Dyes and dyeing) (Paper chromatography)

KHARKHAROV, A.A.; TSVETKOVA, V.V.

Dyeing of synthetic fibers. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.3:115-119 '62. (MIRA 17:10)

1. Leningradskiy tekstil'nyy institut imeni Kirova.

STARIKOVICH, Ye.Ye.; KHARKHAROV, A.A.

Investigating the diffusion properties of acid metal-containing dyes. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.6:111-116 '62. (MIRA 16:2)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova.
(Dyes and dyeing--Chemistry)