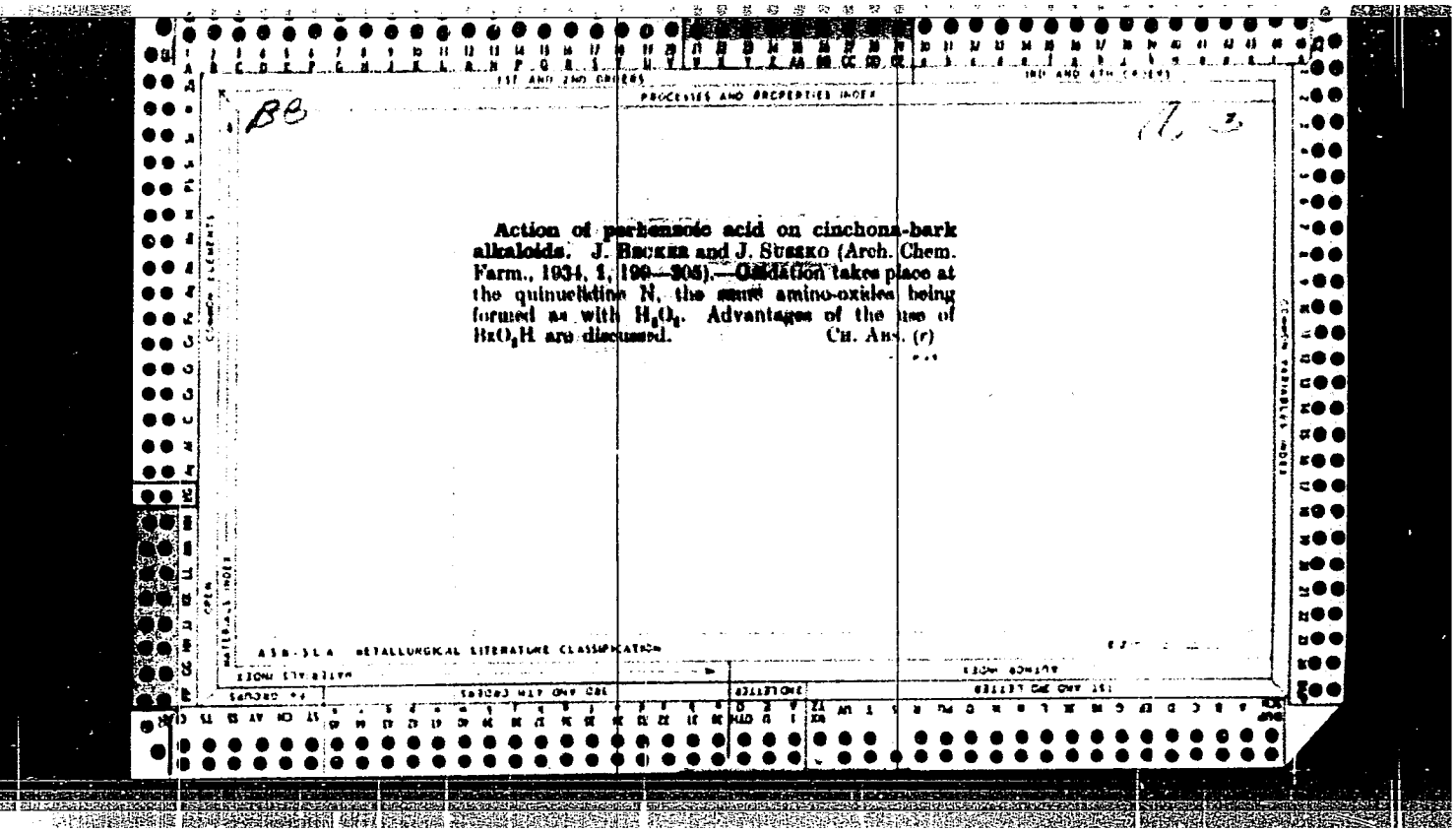

Be

PROCESSES AND PROPERTIES INDEX

Action of perbenzoic acid on cinchona-bark alkaloids. J. Becker and J. Suszko (Arch. Chem. Farm., 1934, 1, 199—205).—Oxidation takes place at the quinuclidine N, the mono amino-oxides being formed as with H_2O_2. Advantages of the use of BzO_2H are discussed. Ch. Abs. (r)

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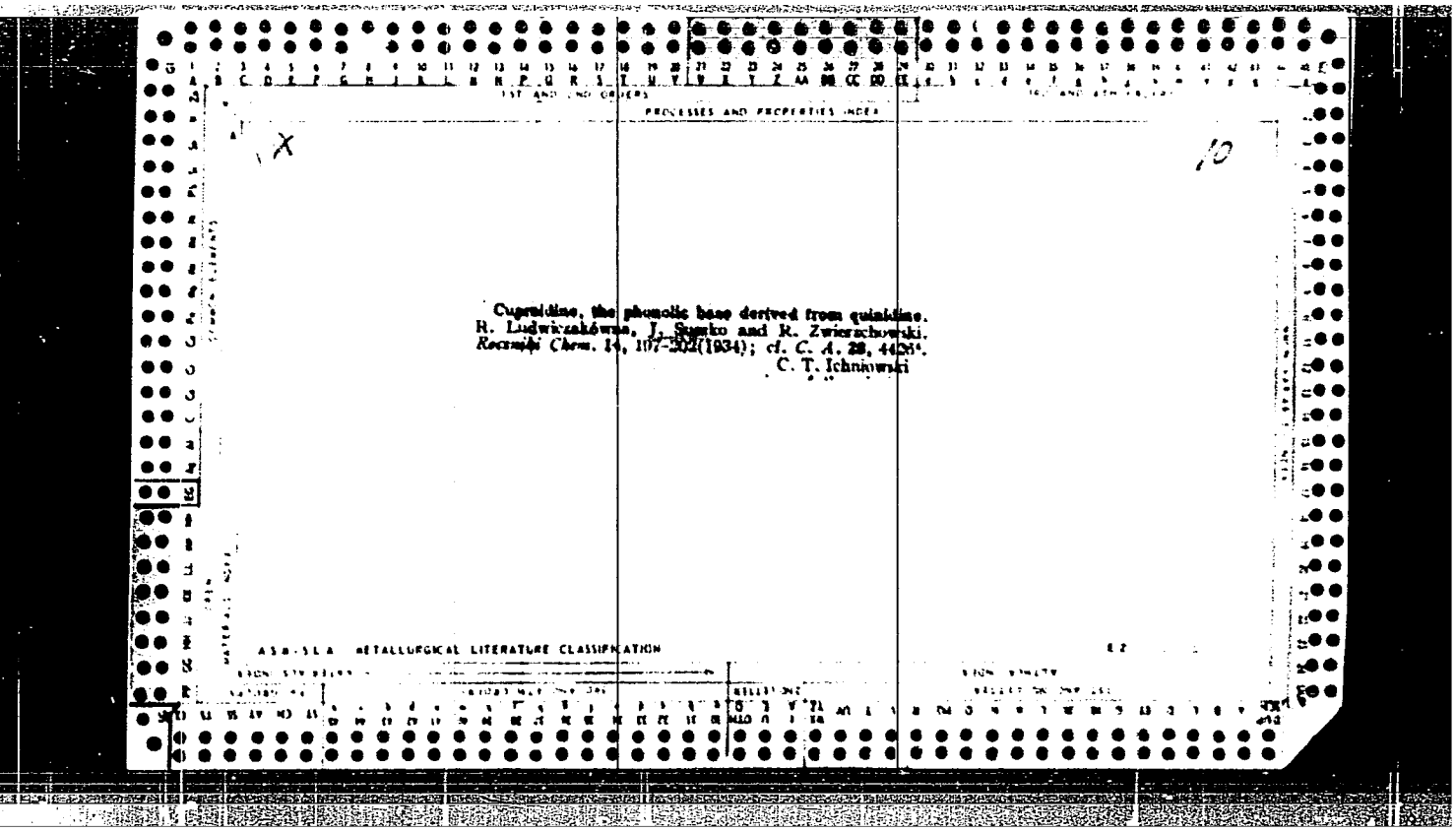
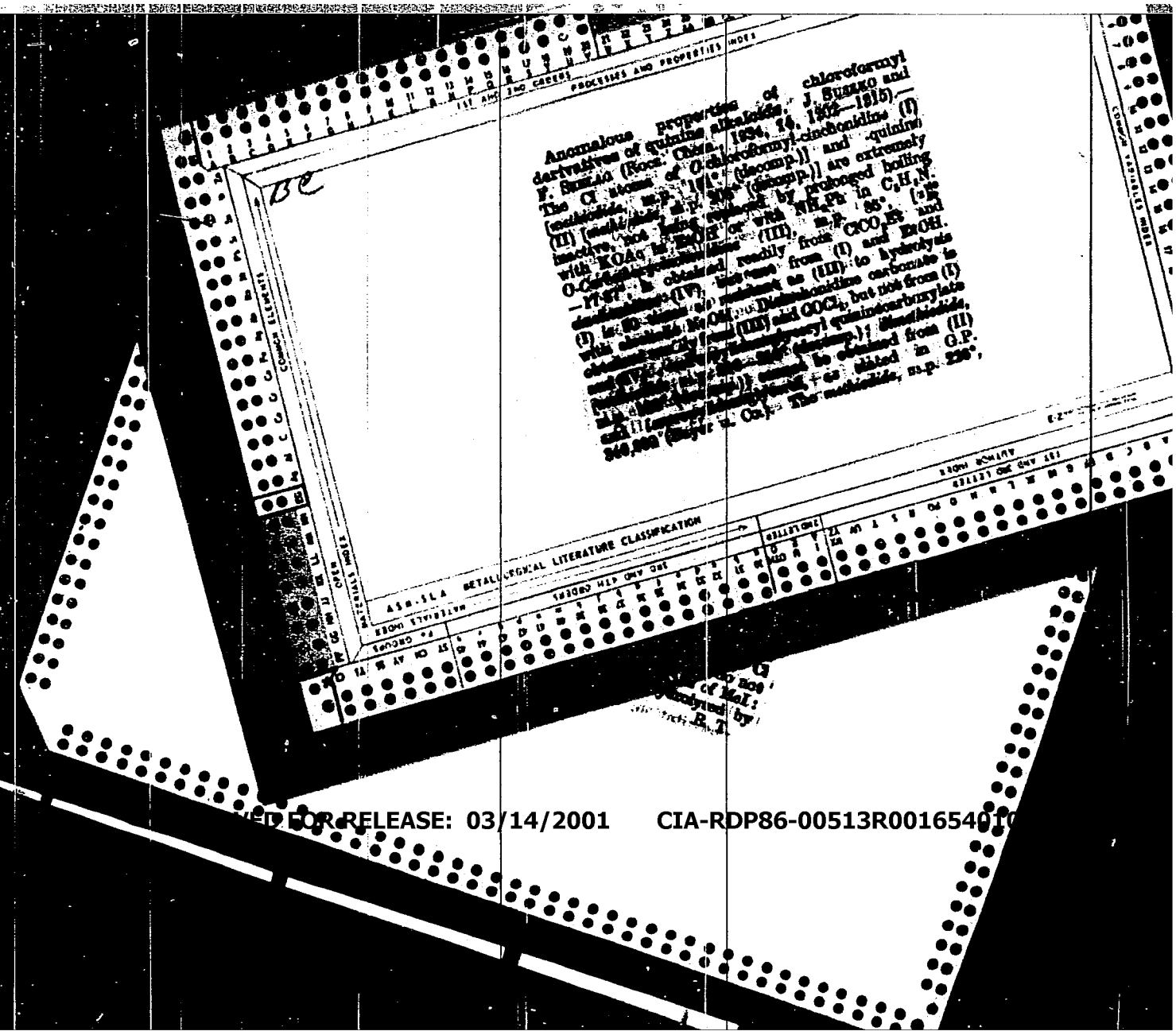
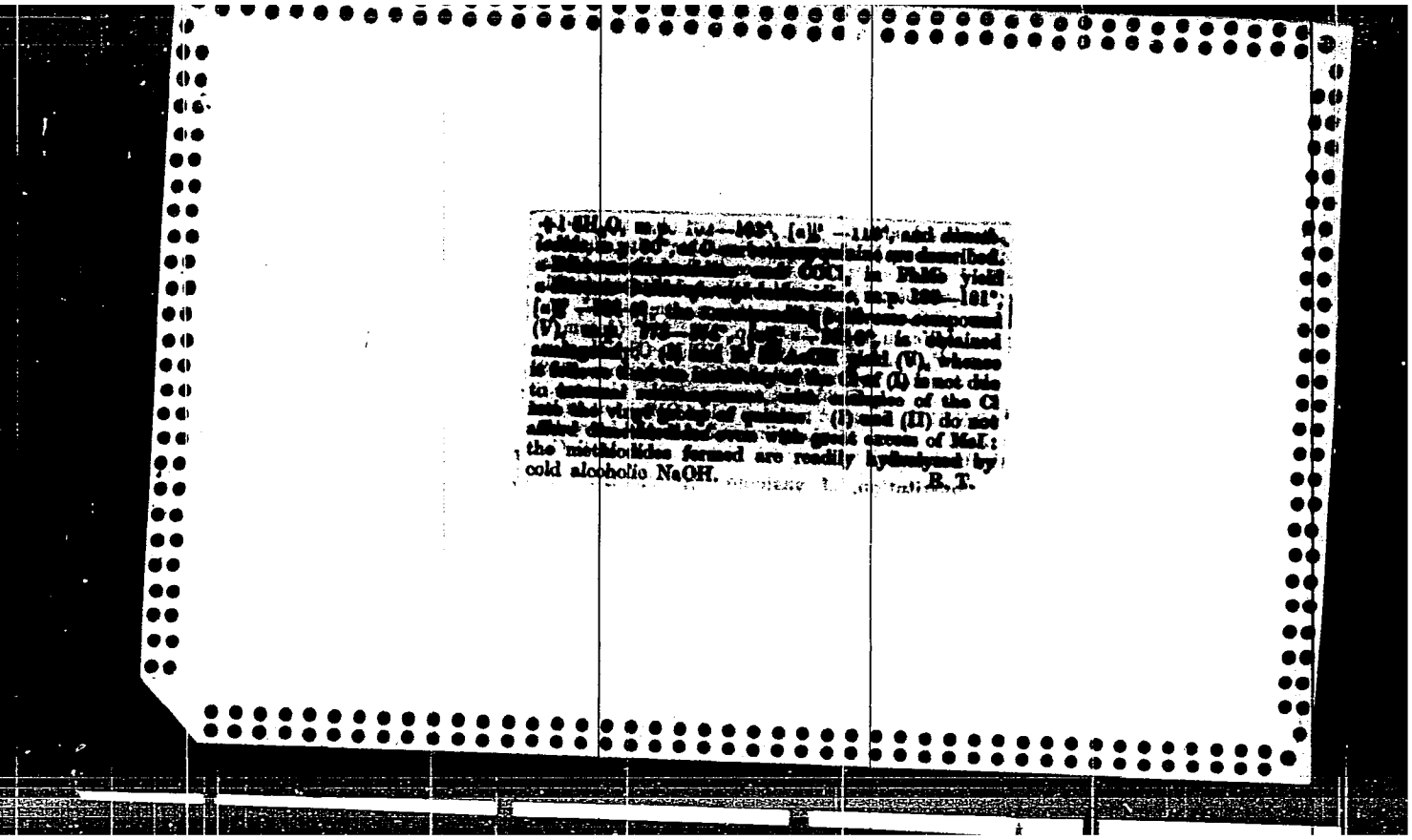
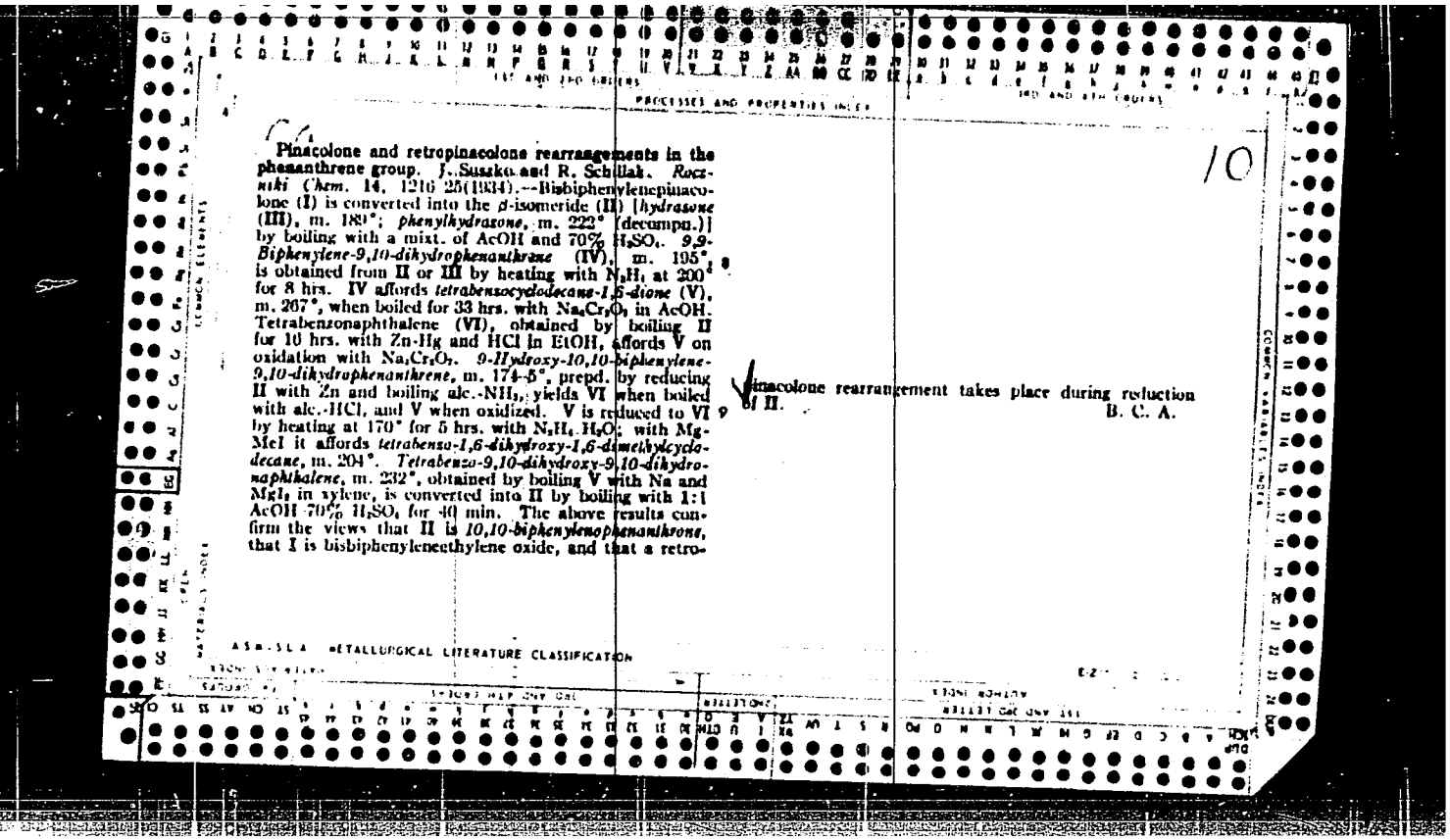


Cupreidine, the phenolic base derived from quinidine.
R. Ludwiczakówna, J. Stenko and R. Zwierzchowski.
Roczniki Chem. 14, 197-202(1934); *cf. C. A.* 28, 4428⁴.
C. T. Ichniowski

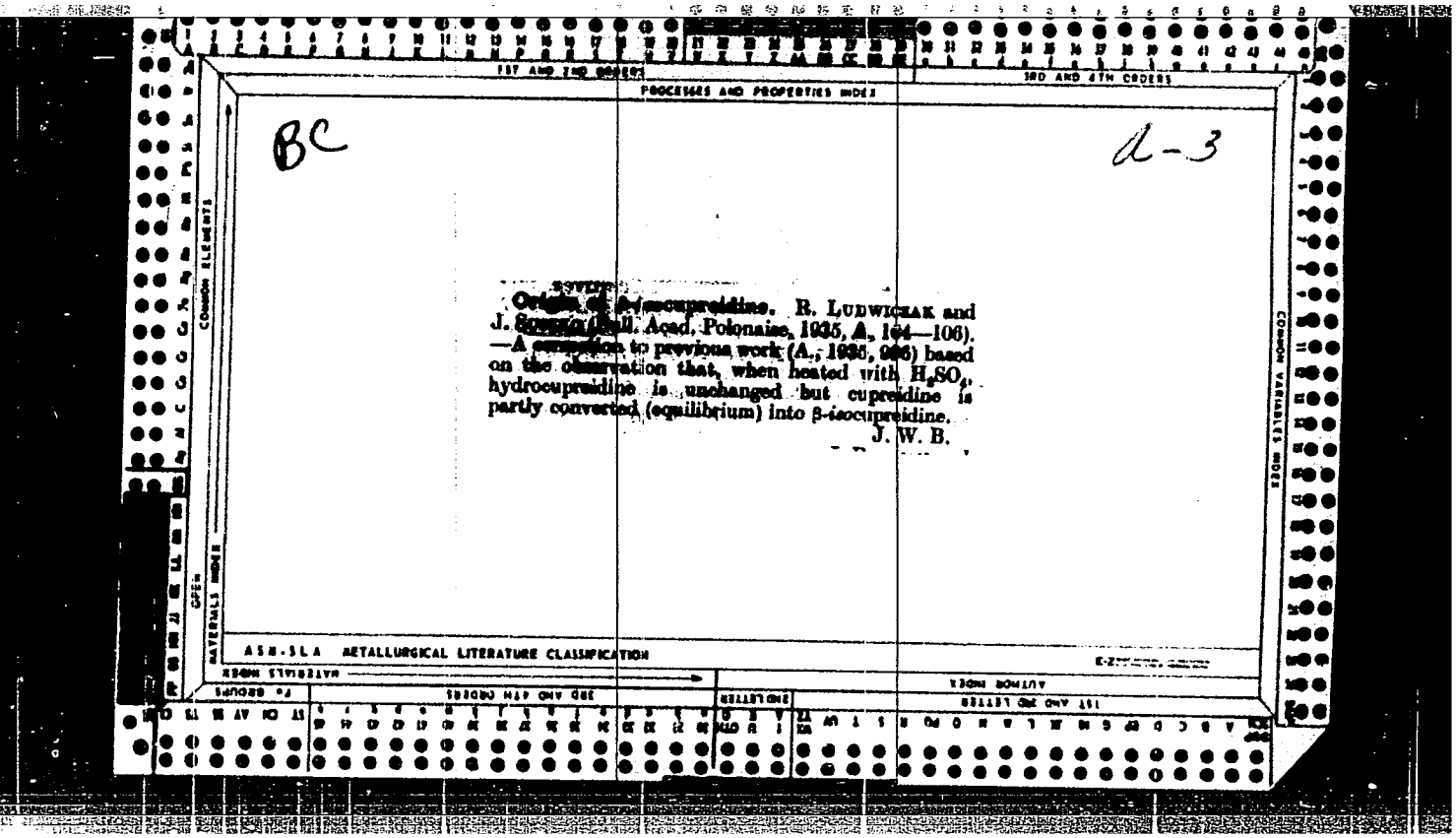




cold alcoholic NaOH. B. T.

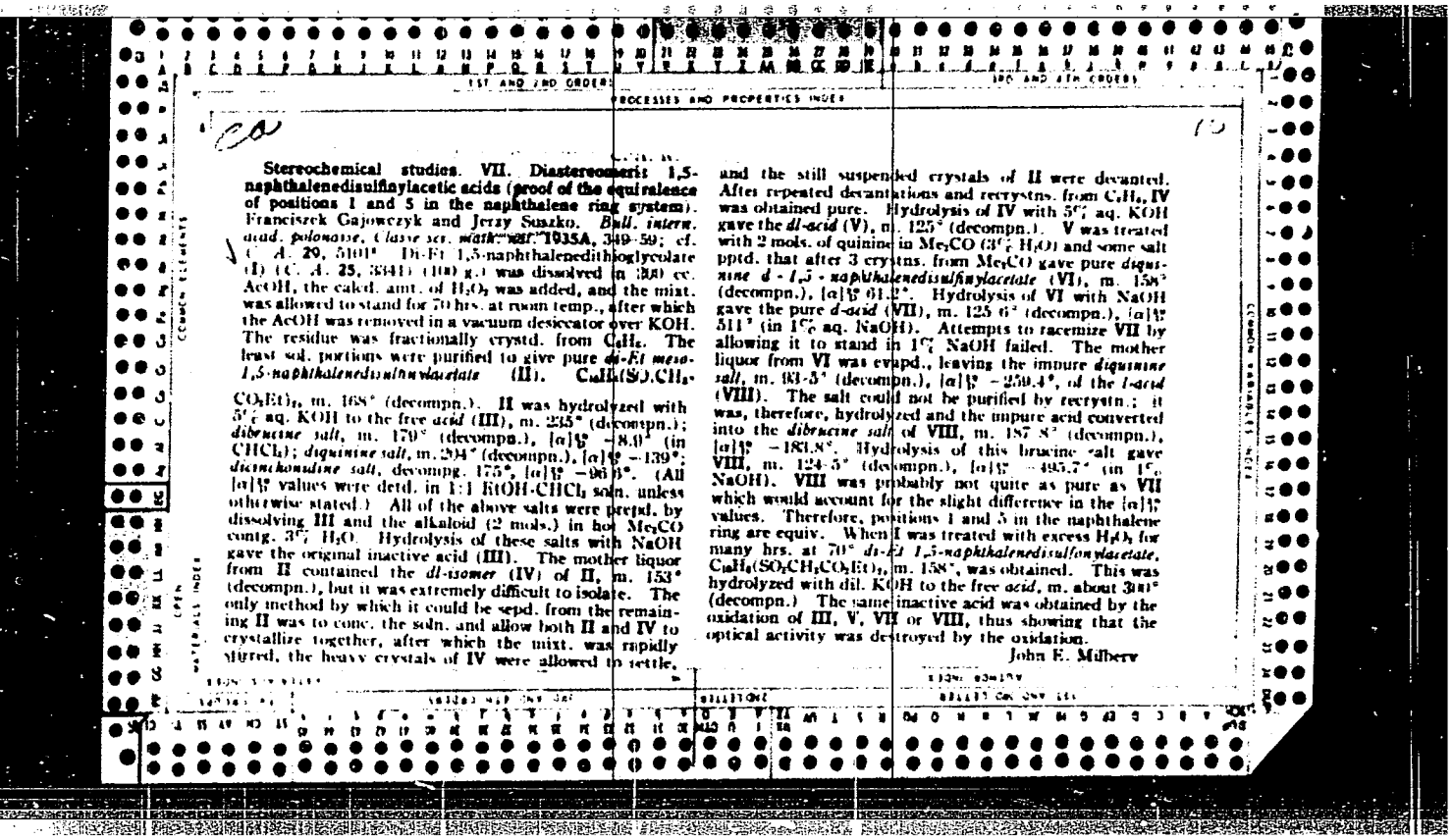


Pinacolone and retropinacolone rearrangements in the phenanthrene group. J. Suszko and R. Schillak. *Roczniki Chem.* 14, 1216-25(1934).--Bisbiphenylenepinacolone (I) is converted into the β-isomeride (II) [*hydrasone* (III), m. 189°; *phenylhydrazone*, m. 222° (decompn.)] by boiling with a mixt. of AcOH and 70% H_2SO_4. *9,9-Biphenylene-9,10-dihydrophenanthrene* (IV), m. 195°, is obtained from II or III by heating with N_2H_4 at 200° for 8 hrs. IV affords *tetrabenzocyclodecane-1,6-dione* (V), m. 267°, when boiled for 33 hrs. with $Na_2Cr_2O_7$ in AcOH. Tetrabenzonaphthalene (VI), obtained by boiling II for 10 hrs. with Zn-Hg and HCl in EtOH, affords V on oxidation with $Na_2Cr_2O_7$. *9-Hydroxy-10,10-biphenylene-9,10-dihydrophenanthrene*, m. 174-5°, prepd. by reducing II with Zn and boiling alc.-NH_3, yields VI when boiled with alc.-HCl, and V when oxidized. V is reduced to VI by heating at 170° for 5 hrs. with $N_2H_4 \cdot H_2O$; with MgMeI it affords *tetrabenzo-1,6-dihydroxy-1,6-dimethylcyclodecane*, m. 204°. *Tetrabenzo-9,10-dihydroxy-9,10-dihydronaphthalene*, m. 232°, obtained by boiling V with Na and MgI_2 in xylene, is converted into II by boiling with 1:1 AcOH 70% H_2SO_4 for 40 min. The above results confirm the views that II is *10,10-biphenylenophenanthrone*, that I is bisbiphenyleneethylene oxide, and that a retro-pinacolone rearrangement takes place during reduction of II. B. C. A.



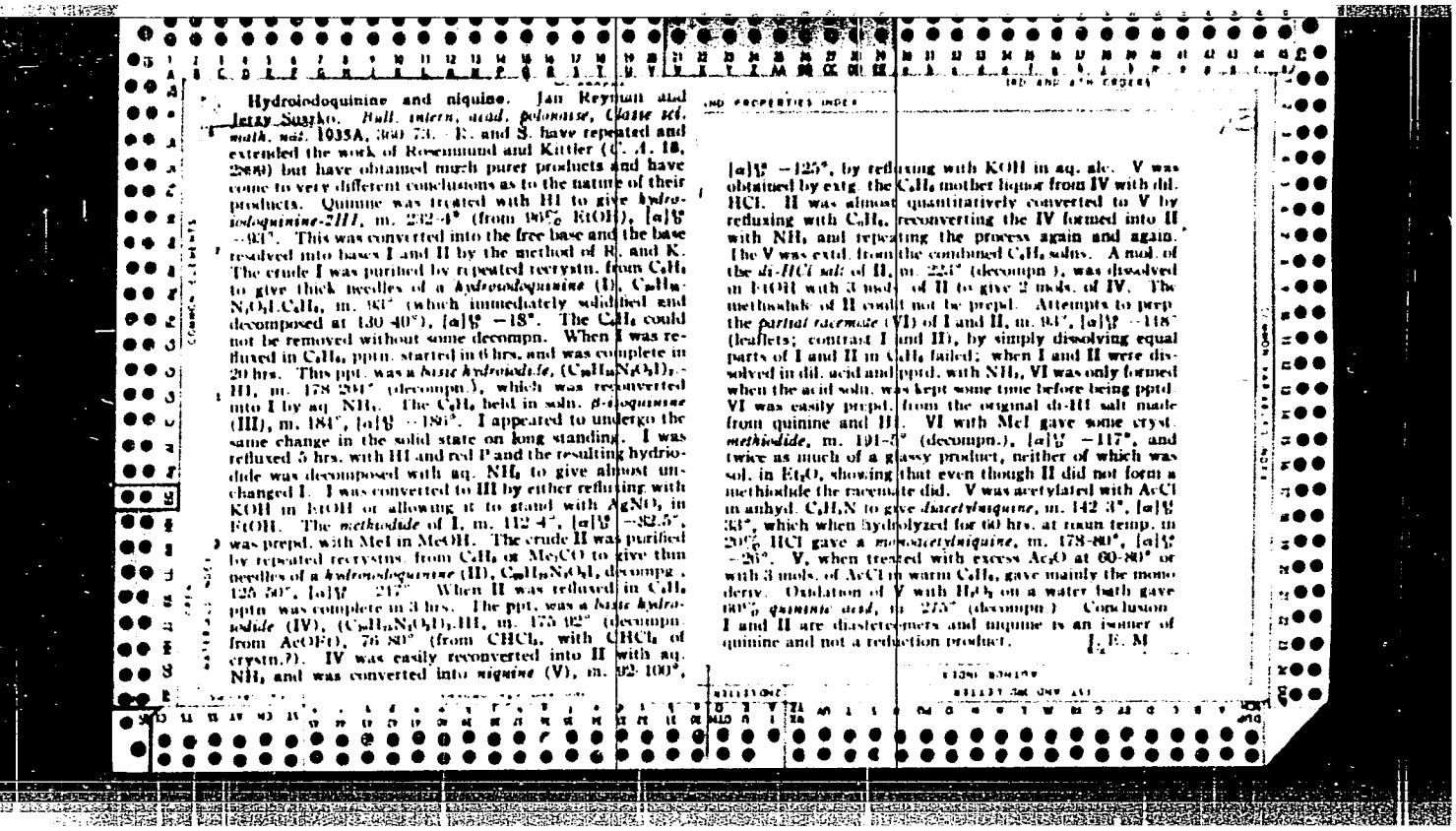
Origin of β-isocupreidine. R. LUDWICZAK and J. [illegible] (Bull. Acad. Polonaise, 1935, A, 101—106). —A correction to previous work (A., 1935, 996) based on the observation that, when heated with H_2SO_4, hydrocupreidine is unchanged but cupreidine is partly converted (equilibrium) into β-isocupreidine.

J. W. B.



Stereochemical studies. VII. Diastereomeric 1,5-naphthalenedisulfinylacetic acids (proof of the equivalence of positions 1 and 5 in the naphthalene ring system). Franciszek Gajowczyk and Jerzy Suszko. *Bull. intern. acad. polonaise, Classe sci. math.-nat.* 1935A, 349-59; cf. *C. A.* **29**, 5101[1]. Di-Et 1,5-naphthalenedithioglycolate (I) (*C. A.* **25**, 3841) (10) g.) was dissolved in 200 cc. AcOH, the calcd. amt. of H_2O_2 was added, and the mixt. was allowed to stand for 70 hrs. at room temp., after which the AcOH was removed in a vacuum desiccator over KOH. The residue was fractionally crystd. from C_6H_6. The least sol. portions were purified to give pure *di-Et meso-1,5-naphthalenedisulfinylacetate* (II). $C_6H_3(SO.CH_2CO_2Et)_2$, m. 168° (decompn.). II was hydrolyzed with 5% aq. KOH to the free *acid* (III), m. 235° (decompn.); *dibrucine salt*, m. 170° (decompn.), $[\alpha]_D^{20}$ −8.0° (in $CHCl_3$); *diquinine salt*, m. 204° (decompn.), $[\alpha]_D^{20}$ −139°; *dicinchonidine salt*, decompg. 175°, $[\alpha]_D^{20}$ −96.9°. (All $[\alpha]_D^{20}$ values were detd. in 1:1 EtOH-$CHCl_3$ soln. unless otherwise stated.) All of the above salts were prepd. by dissolving III and the alkaloid (2 mols.) in hot Me_2CO contg. 3% H_2O. Hydrolysis of these salts with NaOH gave the original inactive acid (III). The mother liquor from II contained the *dl-isomer* (IV) of II, m. 153° (decompn.), but it was extremely difficult to isolate. The only method by which it could be sepd. from the remaining II was to conc. the soln. and allow both II and IV to crystallize together, after which the mixt. was rapidly stirred, the heavy crystals of IV were allowed to settle, and the still suspended crystals of II were decanted. After repeated decantations and recrystns. from C_6H_6, IV was obtained pure. Hydrolysis of IV with 5% aq. KOH gave the *dl-acid* (V), m. 125° (decompn.). V was treated with 2 mols. of quinine in Me_2CO (3% H_2O) and some salt pptd. that after 3 crystns. from Me_2CO gave pure *diquinine d-1,5-naphthalenedisulfinylacetate* (VI), m. 158° (decompn.), $[\alpha]_D^{20}$ 61.2°. Hydrolysis of VI with NaOH gave the pure *d-acid* (VII), m. 125.6° (decompn.), $[\alpha]_D^{20}$ 511° (in 1% aq. NaOH). Attempts to racemize VII by allowing it to stand in 1% NaOH failed. The mother liquor from VI was evapd., leaving the impure *diquinine salt*, m. 83-5° (decompn.), $[\alpha]_D^{20}$ −259.4°, of the *l-acid* (VIII). The salt could not be purified by recrystn.; it was, therefore, hydrolyzed and the impure acid converted into the *dibrucine salt* of VIII, m. 187.8° (decompn.), $[\alpha]_D^{20}$ −183.8°. Hydrolysis of this brucine salt gave VIII, m. 124.5° (decompn.), $[\alpha]_D^{20}$ −495.7° (in 1% NaOH). VIII was probably not quite as pure as VII which would account for the slight difference in the $[\alpha]_D^{20}$ values. Therefore, positions 1 and 5 in the naphthalene ring are equiv. When I was treated with excess H_2O_2 for many hrs. at 70° *di-Et 1,5-naphthalenedisulfonylacetate*, $C_6H_4(SO_2CH_2CO_2Et)_2$, m. 158°, was obtained. This was hydrolyzed with dil. KOH to the free *acid*, m. about 300° (decompn.) The same inactive acid was obtained by the oxidation of III, V, VII or VIII, thus showing that the optical activity was destroyed by the oxidation.

John E. Milberry



Hydroiodoquinine and niquine. Jan Reyman and Jerzy Suszko. *Bull. intern. acad. polonaise, Classe sci. math. nat.* 1935A, 360-73. R. and S. have repeated and extended the work of Rosenmund and Kittler (C. A. 18, 2888) but have obtained much purer products and have come to very different conclusions as to the nature of their products. Quinine was treated with HI to give *hydroiodoquinine-2HI*, m. 232-4° (from 90% EtOH), $[\alpha]_D^{20}$ −93°. This was converted into the free base and the base resolved into bases I and II by the method of R. and K. The crude I was purified by repeated recrystn. from C_6H_6 to give thick needles of a *hydroiodoquinine* (I), $C_{20}H_{24}N_2O_2I.C_6H_6$, m. 83° (which immediately solidified and decomposed at 130-40°), $[\alpha]_D^{20}$ −18°. The C_6H_6 could not be removed without some decompn. When I was refluxed in C_6H_6 pptn. started in 6 hrs. and was complete in 20 hrs. This ppt. was a *basic hydroiodide*, $(C_{20}H_{24}N_2O_2I)_2.HI$, m. 178-284° (decompn.), which was reconverted into I by aq. NH_4. The C_6H_6 held in soln. *di-isoquinine* (III), m. 184°, $[\alpha]_D^{20}$ −185°. I appeared to undergo the same change in the solid state on long standing. I was refluxed 5 hrs. with HI and red P and the resulting hydriodide was decomposed with aq. NH_4 to give almost unchanged I. I was converted to III by either refluxing with KOH in EtOH or allowing it to stand with $AgNO_3$ in EtOH. The *methiodide* of I, m. 112-4°, $[\alpha]_D^{20}$ −32.5°, was prepd. with MeI in MeOH. The crude II was purified by repeated recrystns. from C_6H_6 or Me_2CO to give thin needles of a *hydroisoquinine* (II), $C_{20}H_{24}N_2O_2I$, decomp., 125-50°, $[\alpha]_D^{20}$ −217°. When II was refluxed in C_6H_6 pptn. was complete in 3 hrs. The ppt. was a *basic hydroiodide* (IV), $(C_{20}H_{24}N_2O_2I)_2.HI$, m. 175-92° (decompn. from AcOEt), 76-80° (from $CHCl_3$, with $CHCl_3$ of crystn.?). IV was easily reconverted into II with aq. NH_4 and was converted into *niquine* (V), m. 92-100°, $[\alpha]_D^{20}$ −125°, by refluxing with KOH in aq. alc. V was obtained by extg. the C_6H_6 mother liquor from IV with dil. HCl. II was almost quantitatively converted to V by refluxing with C_6H_6, reconverting the IV formed into II with NH_4 and repeating the process again and again. The V was extd. from the combined C_6H_6 solns. A mol. of the *di-HCl salt* of II, m. 223° (decompn.), was dissolved in EtOH with 3 mols. of II to give 2 mols. of IV. The methiodide of II could not be prepd. Attempts to prep. the *partial racemate* (VI) of I and II, m. 84°, $[\alpha]_D^{20}$ −118° (leaflets; contrast I and II), by simply dissolving equal parts of I and II in C_6H_6 failed; when I and II were dissolved in dil. acid and ppd. with NH_4, VI was only formed when the acid soln. was kept some time before being ppd. VI was easily prepd. from the original di-HI salt made from quinine and HI. VI with MeI gave some cryst. *methiodide*, m. 191-3° (decompn.), $[\alpha]_D^{20}$ −117°, and twice as much of a glassy product, neither of which was sol. in Et_2O, showing that even though II did not form a methiodide the racemate did. V was acetylated with AcCl in anhyd. C_5H_5N to give *diacetylniquine*, m. 142-3°, $[\alpha]_D^{20}$ 83°, which when hydrolyzed for 60 hrs. at room temp. in 20% HCl gave a *monoacetylniquine*, m. 178-80°, $[\alpha]_D^{20}$ −26°. V, when treated with excess Ac_2O at 60-80° or with 3 mols. of AcCl in warm C_6H_6, gave mainly the mono deriv. Oxidation of V with H_2O_2 on a water bath gave 80% *quininic acid*, m. 275° (decompn.). Conclusion: I and II are diastereomers and niquine is an isomer of quinine and not a reduction product. J. E. M.

BC

a-3

Niquidine. T. DOMAŃSKI and J. SUSZKO (Bull. Acad. Polonaise, 1935, A, 457—464).—Quinidine with conc. HCl or HBr (cf. A., 1935, 874, 1137) gives an unsaturated alkaloid, *niquidine* (I), $C_{19}H_{24}N_2O_2$, m.p. 161°, $[\alpha]_D$ +171° in EtOH (*dioxalate*, m.p. 206—207° (decomp.), $[\alpha]_D$ +180° in H_2O; *dihydrobromide*, m.p. 250° (decomp.); N-*NO*-derivative, m.p. 80—130°, decomp. 160—170°, $[\alpha]_D$ —72° in EtOH; *dibromide*, m.p. 170—171° (decomp.), $[\alpha]_D$ +142° in MeOH [*dihydrobromide*, m.p. 236° (decomp.), $[\alpha]_D$ +152° in MeOH and H_2O; *dinitrate*, m.p. 180—187° (decomp.)]; N-*Ac*, m.p. 206—207°, $[\alpha]_D$ +25° in EtOH; and N-*Ac*$_2$, m.p. 80—90°, $[\alpha]_D$ —28° in EtOH, derivatives). (I) with 25% AcOH in a sealed tube gives niche... (nichécin) (II), m.p. 70°, $[\alpha]_D$ —5° (*p*-*nitrophenylhydrazone*, m.p. about 60°), and with H_2O_2 yields quininic acid. (I) may be as shown

CH_2:CH·CH—CH—CH_2
[$(CH_2)_2$]
CH_2—N——CH·CH(OH)·C_9H_5N·OMe.

and (II) $C_7H_{10}(CH_2{\cdot}NH_2)(CH_2{\cdot}CO{\cdot}C_9H_5N{\cdot}OMe)$.

F. R. G.

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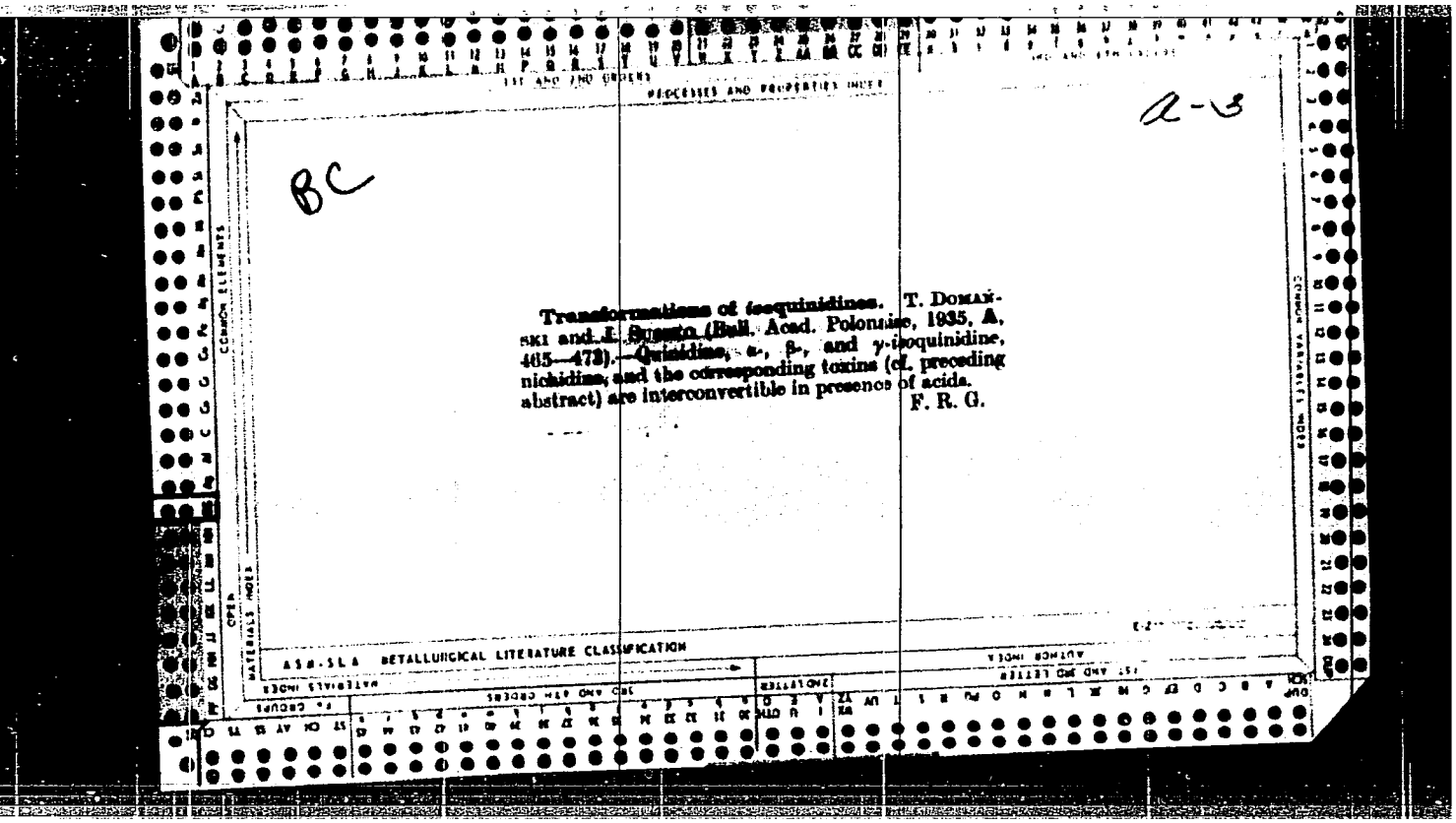
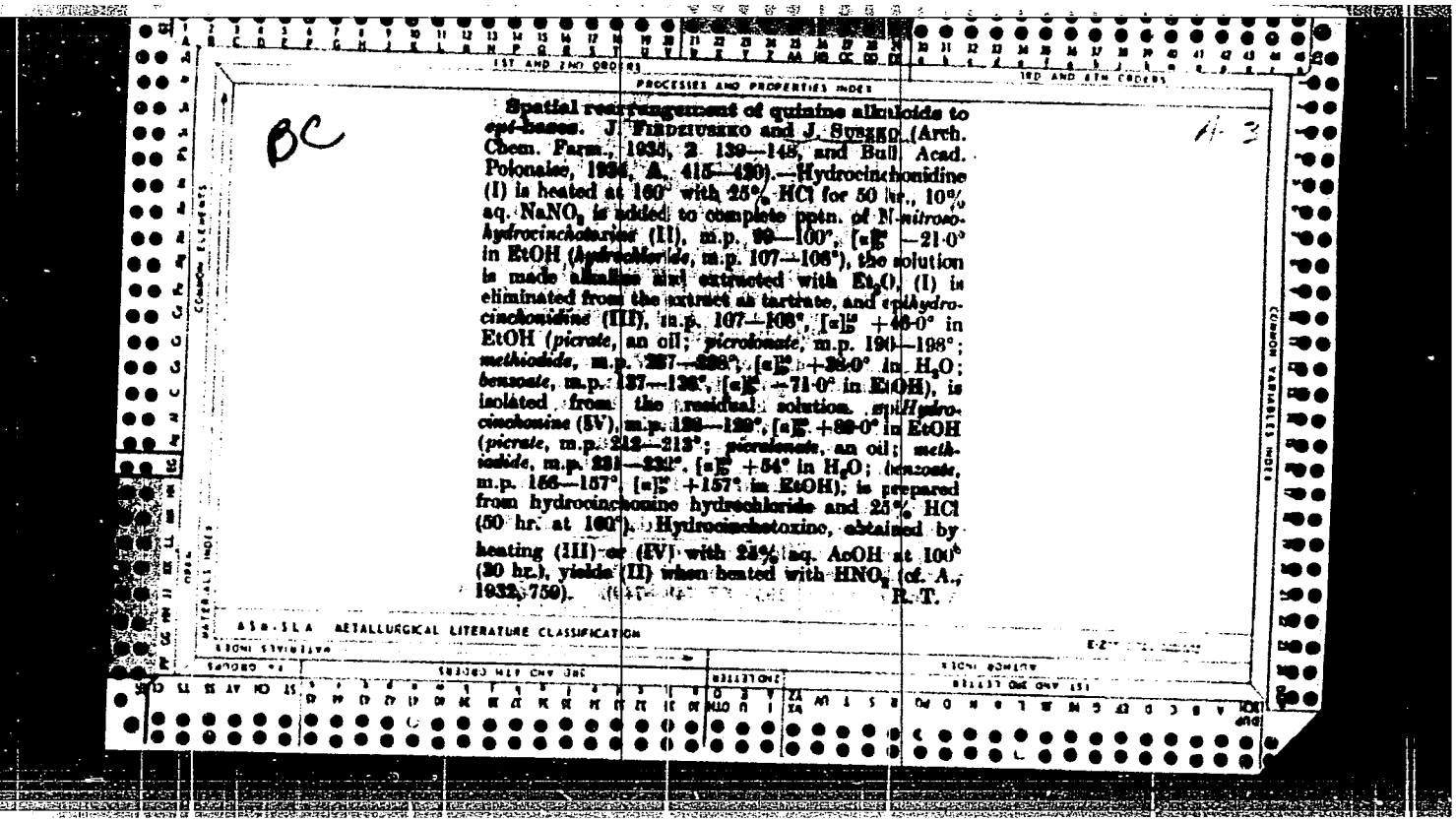


Transformations of isoquinidines. T. Domański and J. Suszko (Bull. Acad. Polonaise, 1935, A, 465—472).—Quinidine, α-, β-, and γ-isoquinidine, nichidine, and the corresponding toxins (cf. preceding abstract) are interconvertible in presence of acids. F. R. G.



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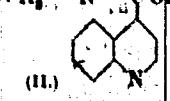
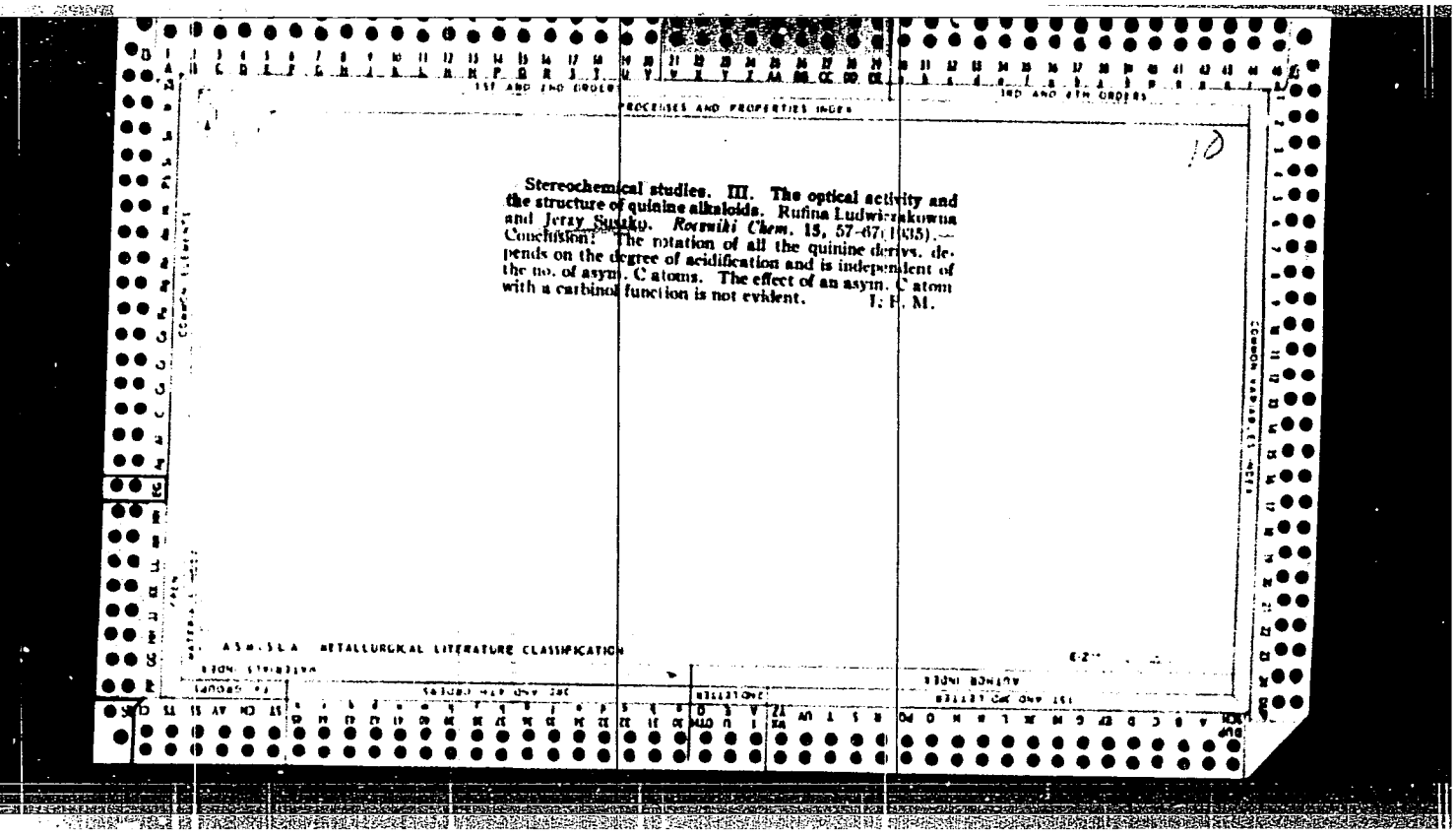
Spatial rearrangement of quinine alkaloids to *epi*-bases. J. Frydrysiakko and J. Suszko (Arch. Chem. Farm., 1935, 2, 139—148, and Bull. Acad. Polonaise, 1934, A, 415—420).—Hydrocinchonidine (I) is heated at 160° with 25% HCl for 50 hr., 10% aq. $NaNO_2$ is added to complete pptn. of *N-nitroso-hydrocinchotoxine* (II), m.p. 99—100°, $[\alpha]_D^{20}$ −21·0° in EtOH (*hydrochloride*, m.p. 107—108°), the solution is made alkaline and extracted with Et_2O, (I) is eliminated from the extract as tartrate, and *epihydro-cinchonidine* (III), m.p. 107—108°, $[\alpha]_D^{20}$ +46·0° in EtOH (*picrate*, an oil; *picrolonate*, m.p. 190—198°; *methiodide*, m.p. 287—288°, $[\alpha]_D^{20}$ +26·0° in H_2O; *benzoate*, m.p. 137—138°, $[\alpha]_D^{20}$ −71·0° in EtOH), is isolated from the residual solution. *epiHydro-cinchonine* (IV), m.p. 128—129°, $[\alpha]_D^{20}$ +89·0° in EtOH (*picrate*, m.p. 212—213°; *picrolonate*, an oil; *methiodide*, m.p. 231—232°, $[\alpha]_D^{20}$ +54° in H_2O; *benzoate*, m.p. 156—157°, $[\alpha]_D^{20}$ +157° in EtOH), is prepared from hydrocinchonine hydrochloride and 25% HCl (50 hr. at 160°). Hydrocinchotoxine, obtained by heating (III) or (IV) with 25% aq. AcOH at 100° (30 hr.), yields (II) when heated with HNO_2 (cf. A., 1932, 759). R. T.

BC

Rearrangement of hydrocinchonine by esterification in two stages. R. LUDWICZAKÓWNA and J. SUSZKO (Arch. Chem. Farm., 1935, 2, 196—202).—Hydrocinchonine in C_5H_5N gives a *p-toluenesulphonyl* derivative, m.p. 166—167° (decomp.), $[\alpha]_D^{20}$ +32.5° in EtOH, converted by KOBz in EtOH (as the b.p.; 95 hr.) into the *Bz* derivative (I), m.p. 141—142°, $[\alpha]_D^{20}$ −26.8° in EtOH, of heterohydrocinchonine (II), m.p. 301—302°, $[\alpha]_D^{20}$ +154.5° in EtOH, prepared by hydrolysis of (I). The structure (II) is also assigned to the product obtained analogously from cinchonine, and erroneously termed *epicinchonine* (A., 1933, 288). R. T.



(II.)



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Stereochemical studies. III. The optical activity and the structure of quinine alkaloids. Rufina Ludwiczakowna and Jerzy Suszko. *Roczniki Chem.* 15, 57–67 (1935).—Conclusion: The rotation of all the quinine derivs. depends on the degree of acidification and is independent of the no. of asym. C atoms. The effect of an asym. C atom with a carbinol function is not evident. I. E. M.

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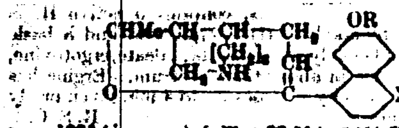
a-3

Demethylation of quinidine. H. L. Ludwiczak and J. Suszko (Bull. Acad. Polonaise, 1936, A, 65—78, and Rocz. Chem., 1936, 16, 209—230; cf. A., 1932, 1242; 1934, 789).—Demethylation (60% H_2SO_4) of both quinidine and *iso*quinidine (I) yields cupreidine (II) and an isomeric phenolic base *iso*cupreidine (III), m.p. 242—243°, $[\alpha]_D$ −78° in 98% EtOH [*hydrochloride* (+H_2O), m.p. [illegible]—257° (decomp.), $[\alpha]_D$ −35·0° in H_2O; *picrate*, m.p. 204—[illegible]° (decomp.); *methiodide* (IV), m.p. [illegible]—260° (decomp.), $[\alpha]_D$ −24·0° in H_2O; [illegible], m.p. 212—[illegible]° (decomp.); *Bz*, m.p. 213—214° (decomp.) (+*2HCl,EtOH*, m.p. [illegible]—207°) and *p-toluenesulphonyl* (+*2HNO$_3$,0·5H$_2$O*) derivative, m.p. [illegible]—147° (decomp.); *amine oxide* (+H_2O), m.p. 272—274°], which regenerates (I) on methylation with Me_2SO_4 or CH_2N_2 and is converted into (II) by 60% H_2SO_4. (III) heated with 25% AcOH (100°; 20 hr.) yields *iso*cupreicine (V) (*A*; R=H) [+0·5COMe$_2$,



(*A*.)

m.p. 133° (decomp.), $[\alpha]_D$ +22·5° in 96% EtOH], also obtained by demethylation (15% HBr) of *iso*quinicine (*A*; R=Me) (cf. A., 1930, 97), formed together with *N*-methyl*iso*quinicine by methylation with CH_2N_2 of (V). (IV) heated with NaOH (5 hr.) yields *N*-methyl*iso*cupreicine, previously named *apo-N*-methyl*iso*quinicine (*loc. cit.*). F. R. G.

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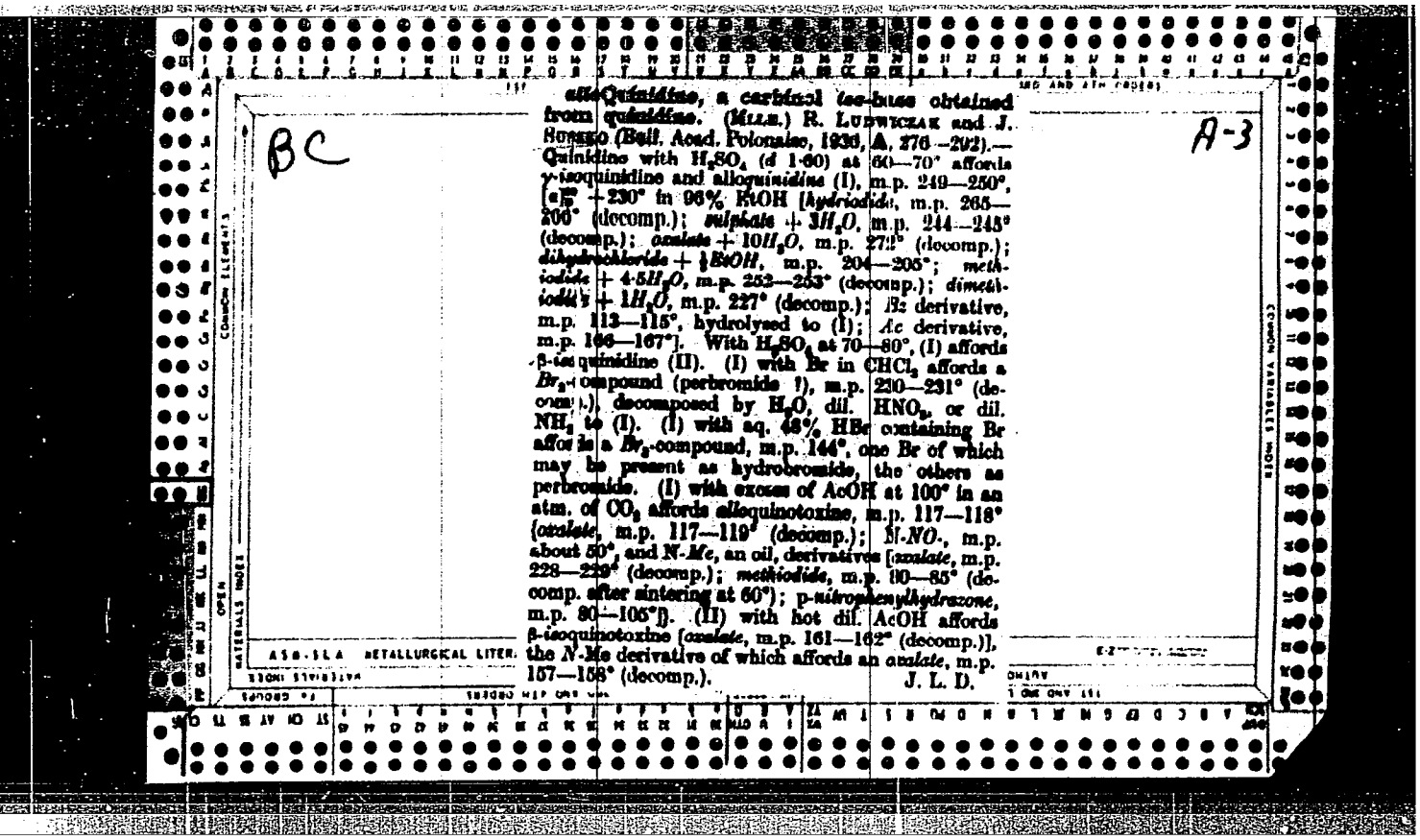
A-3

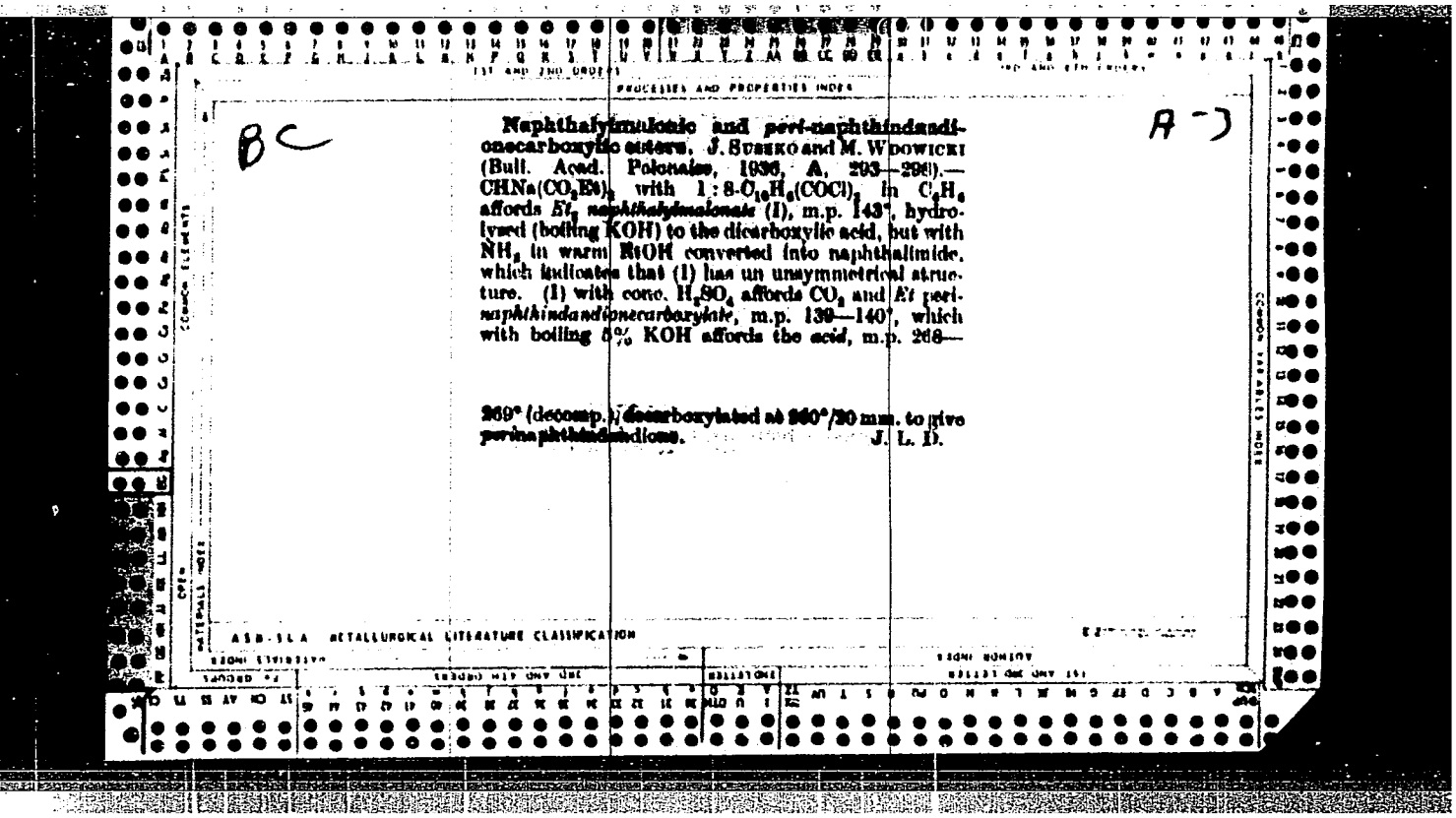
Stereochemical studies. V. Optical isomerism of α-phenylsulphinylphenylacetic acids. W. [illegible] and J. [illegible] (Rocz. Chem., 1935, 15, 221—233).—Racemic SPh·CHPh·CO_2H (I), m.p. 103—104°, and brucine yield a *salt* (II), $+C_6H_6$, m.p. 97° (decomp.), $[\alpha]_D$ +58°, from which the d-*acid* (III), m.p. 129—130°, $[\alpha]_D$ +216°, is regenerated; cinchonidine (IV) and *dl*-(I) yield a mixture of *d*- and *l*-salt (chiefly *d*-), from which pure (III) is obtained by hydrolysis and fractional crystallisation. The *salt* obtained from (III) and (IV) has m.p. 176—178° (decomp.), $[\alpha]_D$ +38·6°. The *acid* (V) regenerated from the mother-liquors from (II) has m.p. 129—130°, $[\alpha]_D$ −215·6°; a 1 : 1 mixture of (III) and (V) has m.p. 103—104°. (V) and *l*-menthylamine afford a *salt*, m.p. 157—158°, $[\alpha]_D$ −170·3°. (III) yields (+)(+)PhSO·CHPh·CO_2H (VI), m.p. 149—150°, $[\alpha]_D$ +419·4°, when treated with H_2O_2 in AcOH; the filtrate contains PhSO·CHPh·CO_2H, m.p. 130° (decomp.), $[\alpha]_D$ +193°. The (−)s-(−)c-, m.p. 148—149° (decomp.), $[\alpha]_D$ −420·4°, and (+)s-(−)c-, m.p. 139° (decomp.), $[\alpha]_D$ −191·2°, acids are obtained analogously from (V). 1 : 1 Mixtures of the (−)s-(−)c- and (−)s-(+)c-acids, and of the (+)s-(−)c- and (+)s-(+)c-acids have m.p. 135—137°, $[\alpha]_D$ ±116°. (III), on protracted treatment with H_2O_2 in AcOH, affords $PhSO_2$·CHPh·CO_2H, m.p. 186—187° (decomp.), $[\alpha]_D$ +107·6° (both diminished on repeated crystallisation), which represents a mixture of unstable optical isomerides. The above findings for the diastereoisomerides of (VI) are in agreement with the principle of optical superposition. All vals. of [α] are in 1 : 1 EtOH-$CHCl_3$.

R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



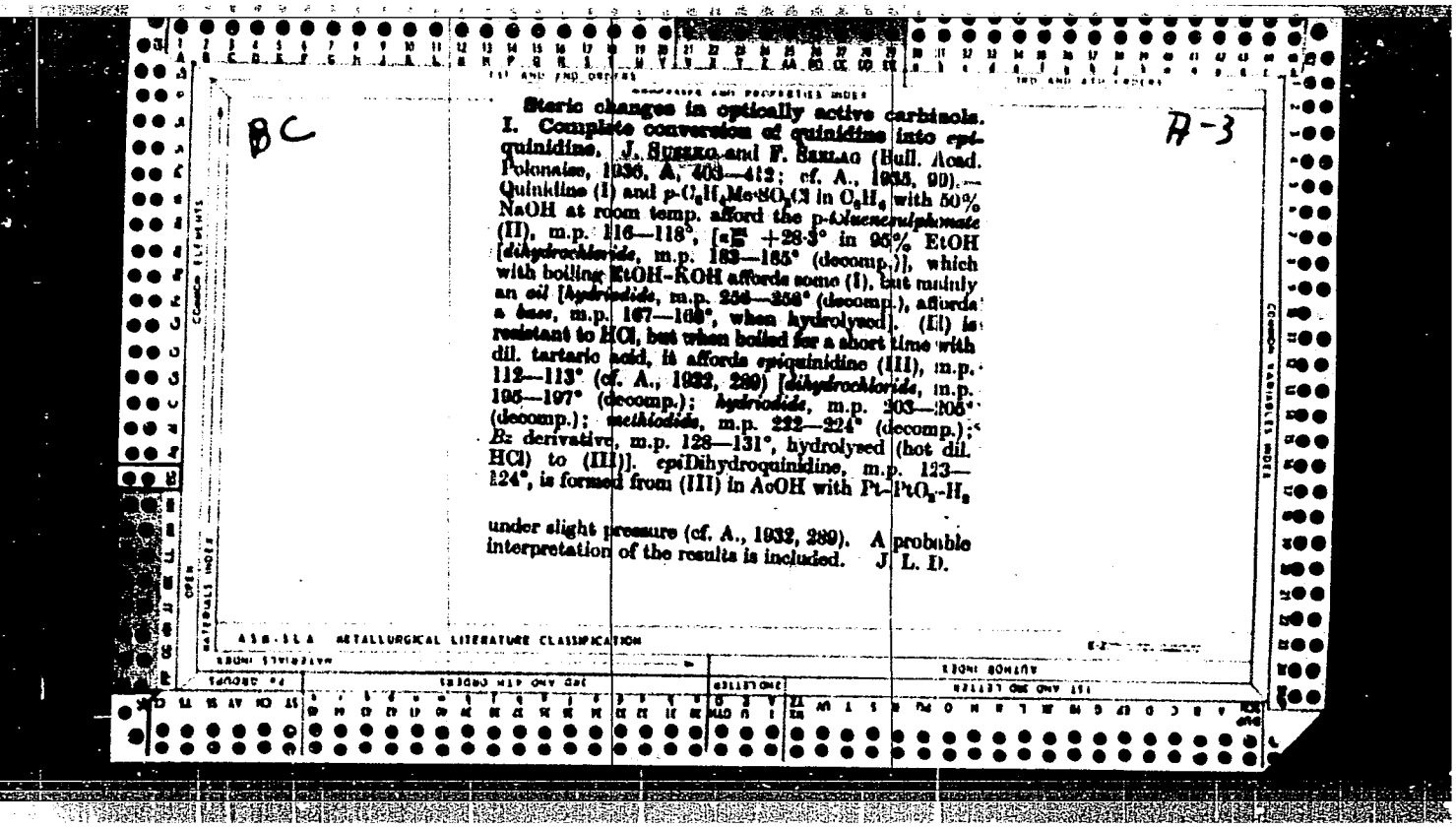
allo-Quinidine, a cardinal *iso*-base obtained from *quinidine*. (Mlle.) R. Ludwiczak and J. Rousso (*Bull. Acad. Polonaise*, 1930, A, 276—292).—Quinidine with H_2SO_4 (*d* 1·60) at 60—70° affords γ-isoquinidine and alloquinidine (I), m.p. 249—250°, $[\alpha]_D^{20}$ +230° in 96% EtOH [*hydriodide*, m.p. 265—266° (decomp.); *sulphate* + $3H_2O$, m.p. 244—245° (decomp.); *oxalate* + $10H_2O$, m.p. 27?° (decomp.); *dihydrochloride* + ½*EtOH*, m.p. 204—205°; *methiodide* + $4{\cdot}5H_2O$, m.p. 252—253° (decomp.); *dimethiodide* + $1H_2O$, m.p. 227° (decomp.); *Bz* derivative, m.p. 113—115°, hydrolysed to (I); *Ac* derivative, m.p. 166—167°]. With H_2SO_4 at 70—80°, (I) affords β-*iso*quinidine (II). (I) with Br in $CHCl_3$ affords a Br_2-compound (perbromide ?), m.p. 230—231° (decomp.), decomposed by H_2O, dil. HNO_3, or dil. NH_3 to (I). (I) with aq. 48% HBr containing Br affords a Br_2-compound, m.p. 144°, one Br of which may be present as hydrobromide, the others as perbromide. (I) with excess of AcOH at 100° in an atm. of CO_2 affords *allo*quinotoxine, m.p. 117—118° [*oxalate*, m.p. 117—119° (decomp.); *N-NO-*, m.p. about 50°, and *N-Me*, an oil, derivatives [*oxalate*, m.p. 228—229° (decomp.); *methiodide*, m.p. 80—85° (decomp. after sintering at 60°); *p-nitrophenylhydrazone*, m.p. 80—105°]]. (II) with hot dil. AcOH affords β-*iso*quinotoxine [*oxalate*, m.p. 161—162° (decomp.)], the *N*-Me derivative of which affords an *oxalate*, m.p. 157—158° (decomp.). J. L. D.



BC

A-3

Naphthalylmalonic and *peri*-naphthindandionecarboxylic esters. J. Suszko and M. Wdowicki (Bull. Acad. Polonaise, 1936, A, 293—298).—$CHNa(CO_2Et)_2$ with 1 : 8-$C_{10}H_6(COCl)_2$ in C_6H_6 affords *Et*$_2$ *naphthalylmalonate* (I), m.p. 143°, hydrolysed (boiling KOH) to the dicarboxylic acid, but with NH_3 in warm EtOH converted into naphthalimide, which indicates that (I) has an unsymmetrical structure. (I) with conc. H_2SO_4 affords CO_2 and *Et peri-naphthindandionecarboxylate*, m.p. 139—140°, which with boiling 5% KOH affords the *acid*, m.p. 268—269° (decomp.), decarboxylated at 260°/20 mm. to give *peri*-naphthindandione. J. L. D.



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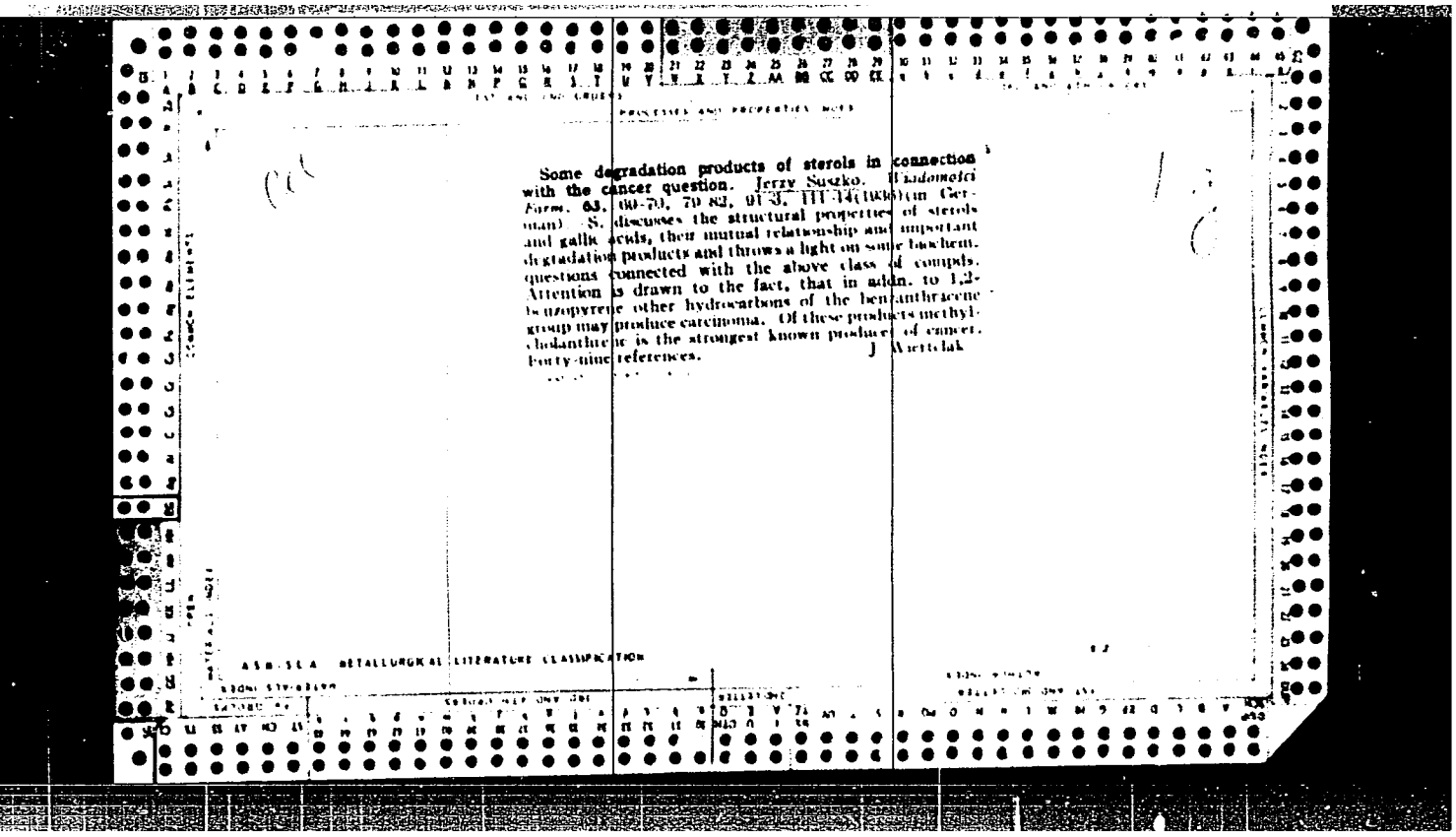
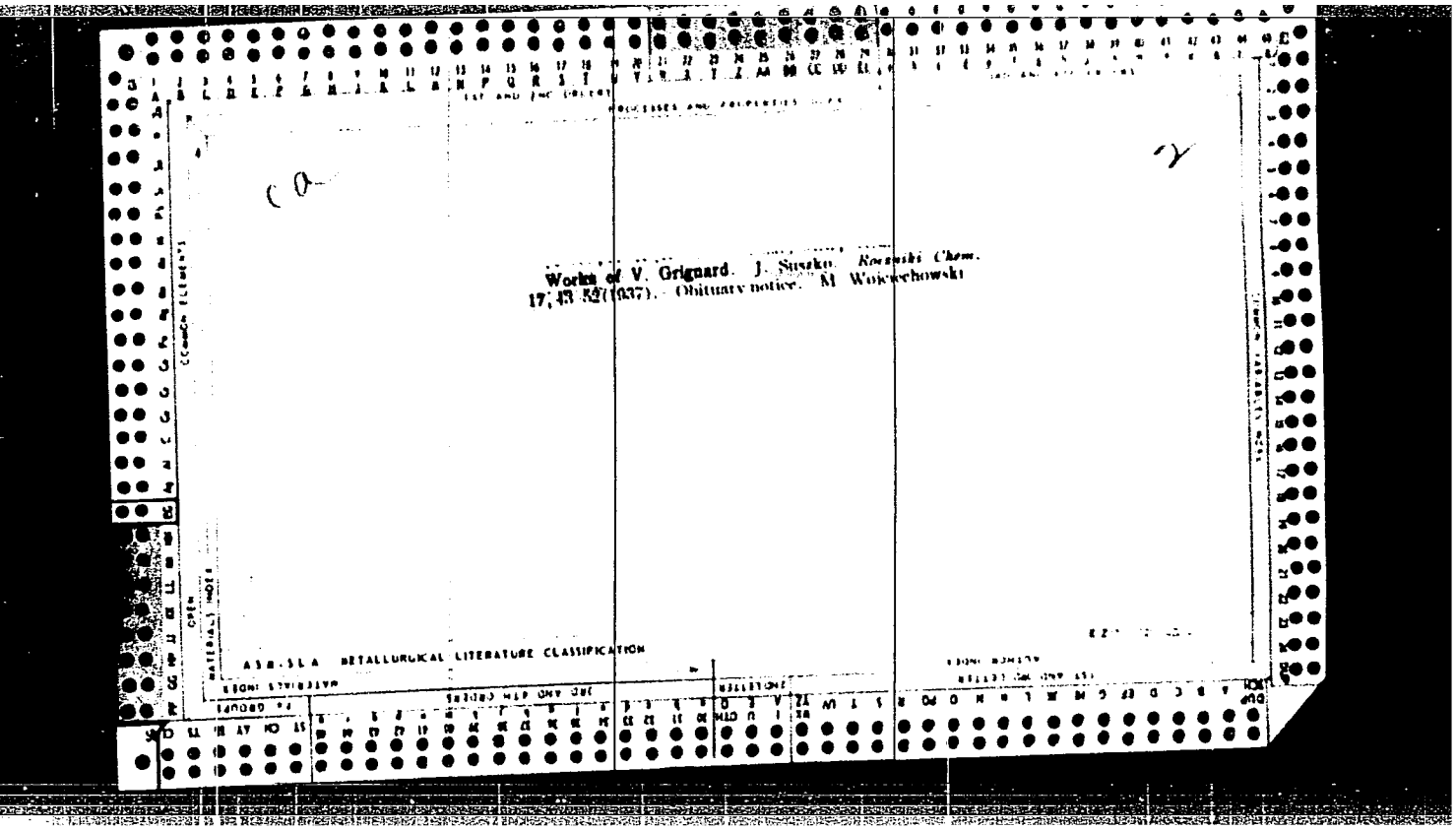
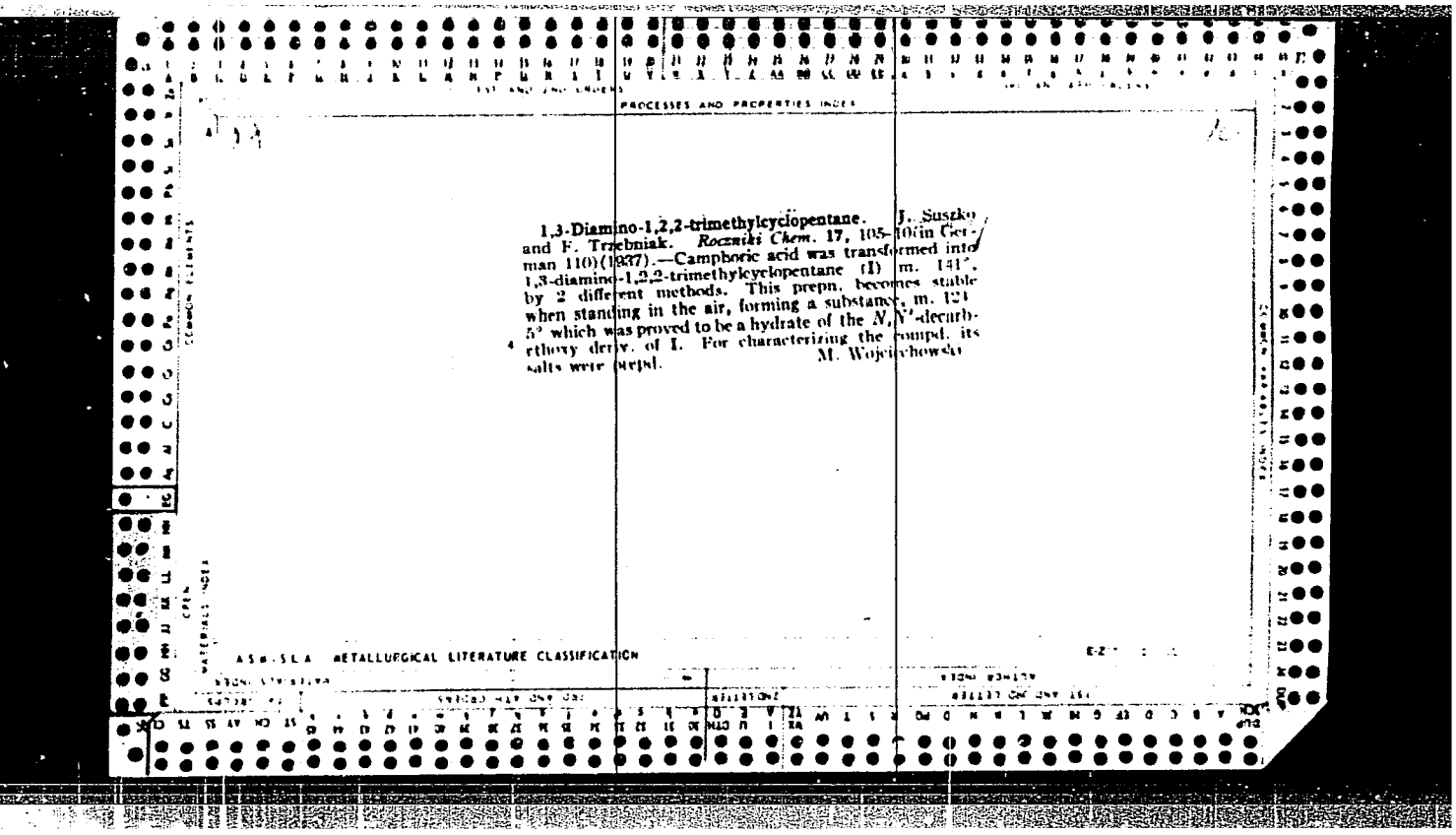
A-3

Steric changes in optically active carbinols. I. Complete conversion of quinidine into *epi*quinidine. J. Suszko and F. Sallao (Bull. Acad. Polonaise, 1936, A, 403—412; cf. A., 1935, 99).—Quinidine (I) and p-$C_6H_4Me\cdot SO_2Cl$ in C_5H_5N with 50% NaOH at room temp. afford the *p-toluenesulphonate* (II), m.p. 116—118°, $[\alpha]_D^{20}$ +28·3° in 95% EtOH [*dihydrochloride*, m.p. 183—185° (decomp.)], which with boiling EtOH–KOH affords some (I), but mainly an *oil* [*hydriodide*, m.p. 256—258° (decomp.), affords a *base*, m.p. 167—169°, when hydrolysed]. (II) is resistant to HCl, but when boiled for a short time with dil. tartaric acid, it affords *epi*quinidine (III), m.p. 112—113° (cf. A., 1932, 289) [*dihydrochloride*, m.p. 195—197° (decomp.); *hydriodide*, m.p. 203—205° (decomp.); *methiodide*, m.p. 222—224° (decomp.); *Bz* derivative, m.p. 128—131°, hydrolysed (hot dil. HCl) to (III)]. *epi*Dihydroquinidine, m.p. 123—124°, is formed from (III) in AcOH with Pt–PtO_2–H_2 under slight pressure (cf. A., 1932, 289). A probable interpretation of the results is included. J. L. D.



Some degradation products of sterols in connection with the cancer question. Jerzy Suszko. *Wiadomości Farm.* 63, 00-70, 70-82, 91-3, 111-14(1948)(in German). S. discusses the structural properties of sterols and gallic acids, their mutual relationship and important degradation products and throws a light on some biochem. questions connected with the above class of compds. Attention is drawn to the fact, that in addn. to 1,2-benzopyrene other hydrocarbons of the benzanthracene group may produce carcinoma. Of these products methylcholanthrene is the strongest known producer of cancer. Forty-nine references. J Wertelak





PROCESSES AND PROPERTIES INDEX

1,3-Diamino-1,2,2-trimethylcyclopentane. J. Suszko and F. Trzebniak. *Roczniki Chem.* 17, 105-10(in German 110)(1937).—Camphoric acid was transformed into 1,3-diamino-1,2,2-trimethylcyclopentane (I) m. 141°, by 2 different methods. This prepn. becomes stable when standing in the air, forming a substance, m. 124-5° which was proved to be a hydrate of the *N,N'*-dicarbethoxy deriv. of I. For characterizing the compd. its salts were useful. M. Wojciechowski

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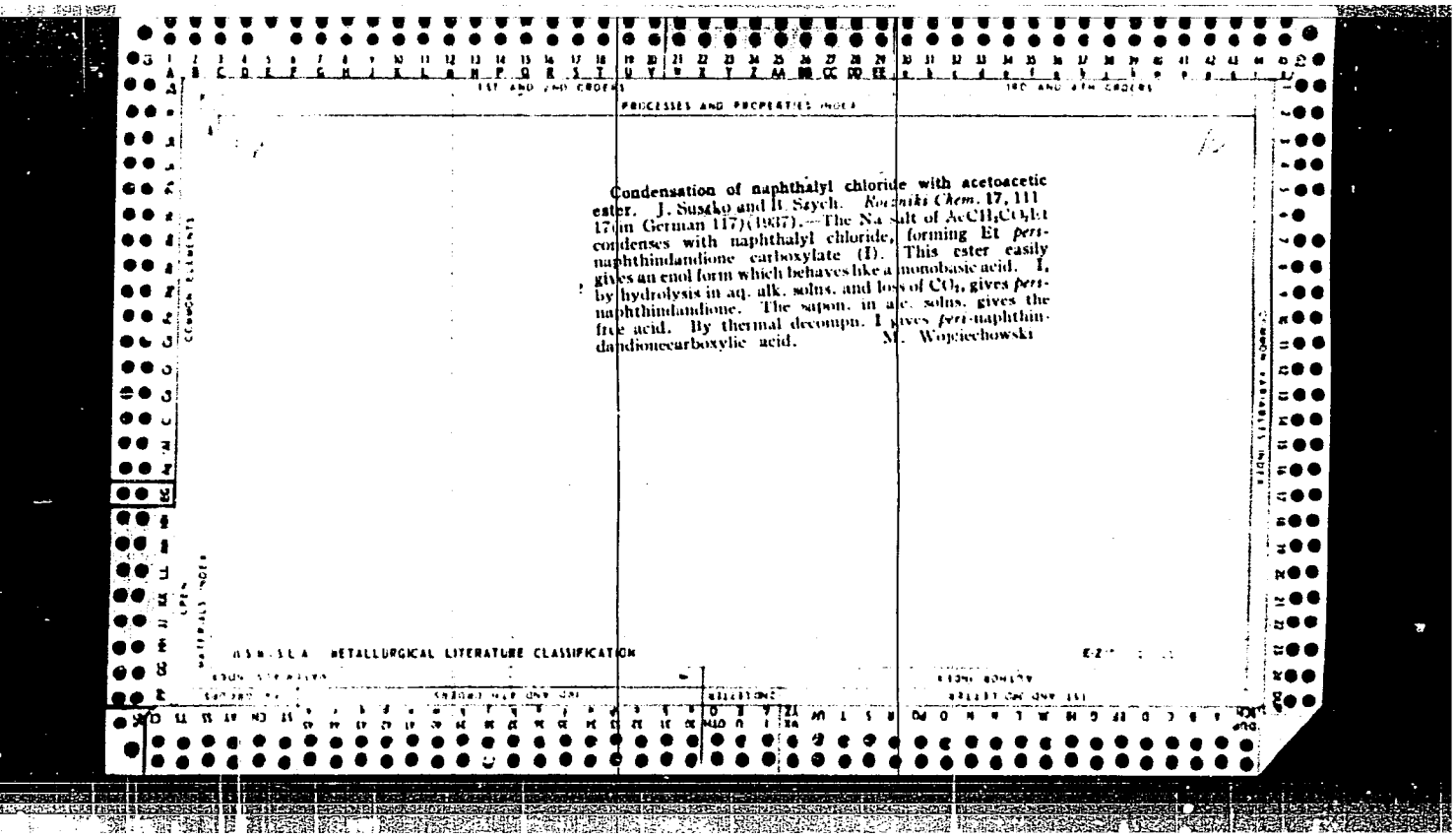
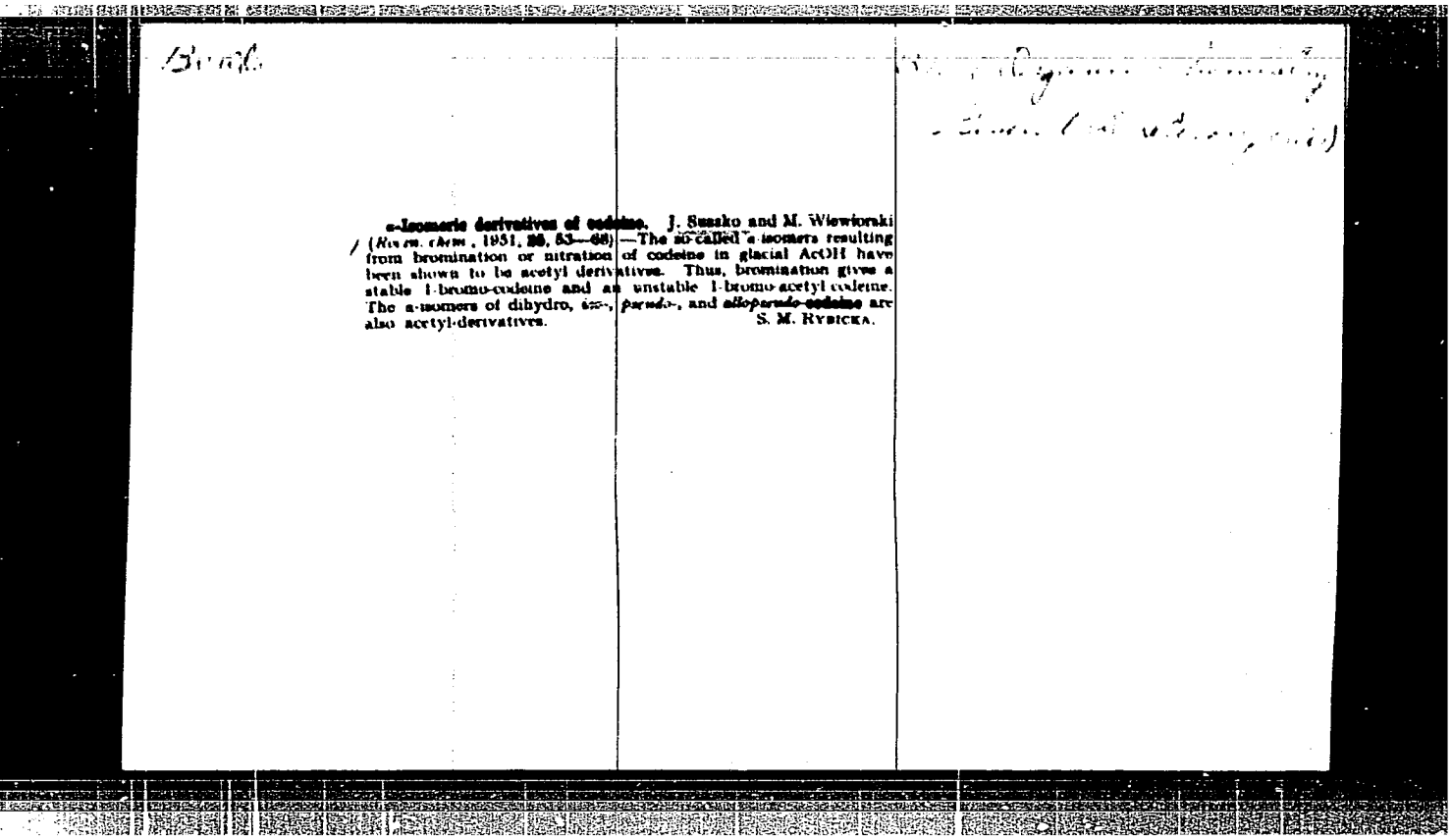


PROCESSES AND PROPERTIES INDEX

Condensation of naphthalyl chloride with acetoacetic ester. J. Susztko and B. Szych. *Roczniki Chem.* 17, 111-17(in German 117)(1937).—The Na salt of $AcCH_2CO_2Et$ condenses with naphthalyl chloride, forming Et *peri*-naphthindandione carboxylate (I). This ester easily gives an enol form which behaves like a monobasic acid. I, by hydrolysis in aq. alk. solns. and loss of CO_2, gives *peri*-naphthindandione. The sapon. in alc. solns. gives the free acid. By thermal decompn. I gives *peri*-naphthindandionecarboxylic acid. M. Wojciechowski

USSR METALLURGICAL LITERATURE CLASSIFICATION



α-Isomeric derivatives of codeine. J. Susako and M. Wiewiorski (*Roczn. chem.*, 1951, **25**, 53—68).—The so-called α-isomers resulting from bromination or nitration of codeine in glacial AcOH have been shown to be acetyl derivatives. Thus, bromination gives a stable 1-bromo-codeine and an unstable 1-bromo-acetyl codeine. The α-isomers of dihydro, iso-, *pseudo-*, and *allopseudo-codeine* are also acetyl-derivatives.

S. M. RYBICKA.

PIPIKE, J.;SUSZKO, J.

Studies on transformation of alkaloid chlorides in quinine group.
Acta Poloniae pharm. 9 no. 4:257-272 1952. (CLML 24:1)

1. Of the Institute of Organic Chemistry of Poznan University.

Suszko, J.

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Naphthalenedisulfinic acids. M. Janczewski and J. Suszko (Univ. Poznań, Poland). *Roczniki Chem.* [illegible] (1952) [illegible] summary). —A new and general method of prepn. of naphthalenedisulfinic acids by reduction of naphthalenedisulfonylchlorides has been developed. Yields of 80-90% can be obtained. The following new *naphthalenedisulfinic acids* were prepd.: *1,4*, m. 156-7° (with decompn.); *1,7*, m. 152-3°, softens and becomes yellow (decomp. at 172°); *1,6*, m. 137-9°, softens and becomes yellow (decomp. at 160°); *2,6*, m. 142-4°, softens, becomes yellow, and then green at 160° (decomp. at 179-82°); *2,7*, softens at 110°, m. 120-22° (decomp. 130 [illegible]). A detailed report is to be given in a forthcoming paper.

Edward A. Ackermann

WS

SUSZKO, TERAZ

Studies on the elements of symmetry of polynuclear hydrocarbons. II. The equivalence of amphi positions in the naphthalene molecule, III. The equivalence of "Pros" positions in the naphthalene molecule. IV. The equivalence of positions 1 and 4 in the naphthalene molecule. Marian Janczevski and Jerzy Suszko (Univ. Poznań, Poland). *Roczniki Chem.* 26, 362-70, 380-93, 394-406 (1952) (English summary); cf. *C.A.* 30, 2953³.—The disubstituted naphthalene (I) derivs. which have attached positions 1,5 (cf. *C.A.* 30, 2953³); 2,6; 3,7; and 1,4 two identical asymmetry centers give two diastereoisomers, one of which is racemic and the other meso. The evidence is that the first two have a symmetry center, the second two a symmetry plane perpendicular to the plane passing through the carbon atoms 9 and 10 and the last one has a symmetry plane passing through the 9–10 bond, dividing this bond into two equal parts. These facts agree with all theories which accept the theory that the rings are planar and disagree with the theory of Kaufler (*C.A.* 1, 1390) and Schlenk (*C.A.* 23, 3917). *2,6-Naphthalenebis(thioglycolic acid)* (II), made by two step reduction of 2,6-naphthalenedisulfonyl dichloride (Zn dust + HCl and $N_2S_2O_4$) and condensation of the dithiol with Na chloroacetate, m. 215–216° (from glacial AcOH); *diacid chloride* of II, by action of $SOCl_2$ on the K salt, m. 75–76°; *di-Et ester* of II (III) m. 91–92; *di-Me ester* of II m. 100–101°. The *di-Et ester* of *2,6-naphthalenebis(sulfinylacetic acid)* (IV) is obtained by oxidation of III (30% H_2O_2 in glacial AcOH at over 40°), meso, m. 144–145°, *dl*, m. 142–143°; *meso acid* (V) m. 290–294° (decompn.) [dicinchonidine salt of V, m. 159–160° (decompn.), $[\alpha]_D^{20}$ −96.2° (90% alc.); dibrucine salt, m. 172–173° (decompn.), $[\alpha]_D^{20}$ −9.4° (alc. + $CHCl_3$ 1:1); diquinine salt, m. 103–107° (decompn.), $[\alpha]_D^{20}$ −139.6° (90% alc.); distrychnine salt, m. 167–168° (decompn.), $[\alpha]_D^{20}$ −9.4° (alc. + $CHCl_3$ 1:1). *dl*-V m. 180° (violent decompn.)]; *d*-V m. 294–295° (decompn.), $[\alpha]_D^{20}$ 213° (1% KOH) [diquinine salt, m. 170° (decompn.), $[\alpha]_D^{20}$ −70.5° (95% alc.)]; *l*-V, m. 294–295°, $[\alpha]_D^{20}$ −213° (1% KOH) [dicinchonidine salt, m. 185–186° (decompn.), $[\alpha]_D^{20}$ −173.3° (90% alc.)]. *2,6-Naphthalenebis(sulfonylacetic acid)*, obtained by oxidation of II (30% H_2O_2 in boiling glacial AcOH), m. 291° (decompn., quick heating (from 50)% alc.). *meso-2,7-Naphthalenebis(thio-2-propionic acid)* (VI) obtained by reduction of 2,7-naphthalenedisulfonyl chloride (as with II) and condensation with 2-bromopropionic acid, m. 122–124° [diquinine salt, m. 134–136°, $[\alpha]_D^{20}$ 121° (MeOH)]; *dl*-VI m. 188–200°; *d*-VI m. 119–121°, $[\alpha]_D^{20}$ 199° (96% alc.) [diquinine salt, m. 182–189° (softens 150°), $[\alpha]_D^{20}$ −37° (MeOH)]; *l*-VI m. 119–121°, $[\alpha]_D^{20}$ −198° (96% alc.) [dibrucine salt, m. 137° (decompn.), $[\alpha]_D^{20}$ −75° (96% alc.)]. *2,7-Naphthalenebis(sulfonyl-2-propionic acid)*, obtained by oxidation of a mixt. VI with 30% H_2O_2 in glacial AcOH (75–80°), m. 110–112°. *1,3-Naphthalenebis(thioglycolic acid)* (VII), m. 202–203°, obtained by reduction of 1,3-naphthalenedisulfonyl chloride in three steps (Zn dust + H_2O, Zn dust + HCl, and $N_2S_2O_4$) and condensation of the dithiol with the Na chloroacetate, purified by crystallization of di-potassium salt. *dl-1,3-Naphthalenebis(sulfinylacetic acid)* (VIII) is obtained by oxidation of VII by 30% H_2O in glacial AcOH, m. 234° (decompn.); *d*-VII m. 212–213° (decompn.), $[\alpha]_D^{20}$ 521° (1% KOH) [dibrucine salt, m. 168–170°, $[\alpha]_D^{20}$ −178.8° (89.6% alc.)]; *l*-VIII m. 212–213° (decompn.), $[\alpha]_D^{20}$ −559° (1% KOH); *meso*-VIII m. 171° (decompn.) [dibrucine salt, m. 163–164° (decompn.), $[\alpha]_D^{20}$ −9.7° (89.6% alc.); diquinine salt, m. 146–147° (decompn.) (89.6% alc.); distrychnine salt, m. 162° (decompn.), $[\alpha]_D^{20}$ −12.7° (89.6% alc.)]. *1,4-Naphthalenebis(sulfonylacetic acid)* is obtained by oxidation of VII (30% H_2O_2 in glacial AcOH), m. 225° (decompn.).

A. Sementsov

Pseudo epialkaloids of cinchona bark. I. Epihydrocupreidine and epihydrocupreine. Lidia Prajer and Jerzy Suszko (Univ. Poznań, Poland). *Roczniki Chem.* 26, 631–43 (1952) (English summary); cf. *C.A.* 31, 1816⁹. — Epimerization of *hydroquinidine* (I) and *hydroquinine* (II) is described. *p*-$MeC_6H_4SO_2Cl$ (5 moles) added in 0.5-mole portions to 1 mole I in C_5H_5N and shaken with 50% NaOH gave 80% *p-toluenesulfonylhydroquinidine* (III), $EtC_7H_{11}NCH(OSO_2C_6H_4Me\text{-}p)C_9H_{11}N(OMe)$, m. 103–4°, $[\alpha]_D^{18}$ 37°; *di-HCl salt*, m. 180–7° (decompn.), $[\alpha]_D^{18}$ 97.3° (alc.), −27° (water). III with aq. tartaric acid gave *epihydroquinidine* (IV), m. 120–1°, $[\alpha]_D^{18}$ 70.4° (alc.). IV with *p*-$MeC_6H_4SO_2Cl$ gave *p-toluenesulfonylepihydroquinidine*, m. 118°, $[\alpha]_D^{18}$ 90.5°, which, boiled 3.5 hrs. with 4 times its wt. of 50% HBr gave *epihydrocupreidine* (V), $EtC_7H_{11}NCH(OH)C_9H_5N(OH)$, pptd. as the HBr salt by dilu. with 4 vols. of water. Treatment with excess 50% NaOH gave the cryst. Na salt which with CO_2 yielded V, m. 218–20° (decompn.), plates from MeOH or EtOH, needles from $CHCl_3$, EtOAc or Me_2CO, $[\alpha]_D^{18}$ 54°. V with an equal amt. of HBr gave V.*HBr*, m. 289–90° (decompn.), $[\alpha]_D^{18}$ 27° (1:1 aq. alc.); with excess HBr it gave V.2*HBr*; m. 273–5° (decompn.), $[\alpha]_D^{18}$ 30° (water); *dipicrate*, yellow rods from dil. alc., m. 237–9° (decompn.); *purolonate*, yellow needles, m. 190° (decompn.); *methiodide*, prisms from MeOH, m. 239–40° (decompn.), $[\alpha]_D^{18}$ 25.8°; *dimethiodide*, grains from alc., m. 253–5° (decompn.); *dibenzoylepihydrocupreidine*, rods from ligroine (b. 60–70°), m. 174–6°, $[\alpha]_D^{18}$ 154° (Me_2CO); decompd. in alc. soln., and racemized slowly at room temp. II with *p*-$MeC_6H_4SO_2Cl$ gave *p-toluenesulfonylhydroquinine* (VI), $EtC_7H_{11}NCH(OSO_2C_6H_4Me\text{-}p)C_9H_{11}N(OMe)$, purified through its di-HCl salt. VI crystd. from ether or aq. alc. in prisms, m. 108–10°, $[\alpha]_D^{18}$ 49° (alc.). VI from 2% HCl, m. 182–3° (decompn.), $[\alpha]_D^{18}$ 36° (alc.). VI gave *epihydroquinine* (VII). $EtC_7H_{11}NCH(OH)C_9H_5N$(OMe) upon hydrolysis with tartaric acid. VII was purified through its HCl salt but could not be crystd.; *HCl salt*, prisms, m. 230–1° (decompn.), $[\alpha]_D^{18}$ 41° (water); *HI salt*, prisms from water, m. 118–20°, $[\alpha]_D^{18}$ 25° (alc.). The mother liquor from the HI salt yielded an oily base, $[\alpha]_D^{18}$ −13.9° (alc.). VII (11 g.) heated with 54 cc. 40% HBr to boiling (125°) and then refluxed 4 hrs.; addn. of 50% NaOH pptd. needles, decompd. with CO_2 to give resinous *epihydrocupreine* (VIII), $EtC_7H_{11}NCH(OH)C_9H_5N(OH)$, prisms from Me_2CO, m. 243–4°, $[\alpha]_D^{18}$ 73.7° (alc.); *HBr salt*, prisms from alc., m. 245–6° (decompn.), $[\alpha]_D^{18}$ 62.5° (alc.); *HI salt*, plates from water or alc., m. 250° (decompn.), $[\alpha]_D^{18}$ 51.7°; *picrolonate*, m. 220° (decompn.); *dipicrate*, yellow rods from alc., m. 222–6° (decompn.); *methiodide*, crystals from alc., m. 236–8° (decompn.), $[\alpha]_D^{18}$ 64.6°; *dimethiodide*, yellow prisms from MeOH, m. 130° (decompn.); *dibenzoylepihydrocupreine*, oil, $[\alpha]_D^{18}$ −82° (Me_2CO), decomp. in alc. soln. Methylation of V and of VIII with CH_2N_2 gave IV and VII, resp., confirming their structure. II. Epicupreidine. *Ibid.* 544–54.—*Epicupreidine* (I), $CH_2{:}CHC_7H_{11}NCH(OH)C_9H_5N(OH)$, was obtained by brominating *epiquinidine* (II) and demethoxylating the resulting stereoisomeric dibromides. II (10 g.) in 20 cc. 80% AcOH was treated with 9 cc. 40% HBr and 16 cc. 10% Br in glacial AcOH, the excess Br removed with $NaHSO_3$, the mixt. poured into 10% NH_4OH, cooled with ice, and quickly shaken with an equal vol. of ether; the ether exts. gave a cryst. fraction of *α-dibromodihydroepiquinidine* (III), $CH_2BrCHBrC_7H_{11}NCH(OH)C_9H_5N(OMe)$,

(over)

Lidia Prajer

rods from alc., m. 214-16° (decompn.), $[\alpha]_D^{25}$ 123° (alc.) [*dinitrate*, needles from water, m. 137-8° (decompn.), $[\alpha]_D^{25}$ 77° (water)]; and an oily fraction contg. *β-dibromodihydroepiquinidine* (IV). The oily fraction dissolved in dil. HCl and poured into cooled 10% NH_4OH gave a ppt. of III. The mother liquor from III dild. with water yielded crystals of IV, prisms, m. 101-5° (from alc.), $[\alpha]_D^{25}$ 68°. III (2 g.) and 8 cc. 66% HBr heated in a closed vessel 53 hrs. at 50-60° (until all of the mixt. was sol. in alkali) gave *α-dibromodihydroepicupreidine*, $CH_2BrCHBrC_7H_{11}NCH(OH)C_9H_5N(OH)$, isolated by adding the reaction mixt. to 40 cc. water, as the *di-HBr salt*, (V), prisms from water, m. 194-7° (decompn.), $[\alpha]_D^{25}$ 74°. V, m. 195-8° (decompn.), $[\alpha]_D^{25}$ 69°, was also prepd. by refluxing the same mixt. 4 hrs. in 48% HBr. V (1 g.) in 10 cc. hot water with 0.2 g. NaOAc in 2 cc. water gave the V.*HBr* (VI), rectangular plates from water, m. 204-6° (decompn.), $[\alpha]_D^{25}$ 82°. IV upon the same treatment as its α-isomer gave the *di-HBr salt of the β-isomer* (VII), yellowish grains from water, m. 195° (decompn.), $[\alpha]_D^{25}$ 80° (water). The mother liquor from the pptn. of VII upon neutralization with $NaHCO_3$ gave the *HBr salt*, rods from water, m. 123-4° (decompn.), $[\alpha]_D^{25}$ 13°. VI (5 g.) in 50 cc. EtOH and 5 g. NaI in 25 cc. EtOH refluxed 40 hrs., the soln. acidified, the iodine removed with $NaHSO_3$ and the alc. with steam, the residue decolorized with activated C, treated with alkali, extd. with ether, the ether-insol. material satd. with CO_2 and the oily ppt. which solidified on standing crystd. from alc. gave a product, m. 239-40° (decompn.), $[\alpha]_D^{25}$ 40° (alc.). This product, which gave a ppt. with $AgNO_3$, was also obtained from V and from VII with NaI and from V with LiI. The Br still contained in the product was in ionic form. The crude product from the debromination of V dissolved in NaOH and excess alkali added gave a ppt. of I which was dissolved in water, repptd. with CO_2, and recrystd. from Me_2CO, giving prisms, m. 207-10° (decompn.), $[\alpha]_D^{25}$ 87° (alc.). The same base prepd. by debromination of VII, m. 208-10°, $[\alpha]_D^{25}$ 88°. Derivs. of I: *HBr salt*, prisms, from water, m. 248-9° (decompn.), $[\alpha]_D^{25}$ 47.1° (alc.); *picrolonate*, needles from alc., m. 189-91° (decompn.); *dipicrate*, lumps from alc., m. 231-3° (decompn.); *methiodide*, square plates from water, m. 222-3° (decompn.), $[\alpha]_D^{25}$ 38.3° (alc.); *dimethio-*

dide, plates from alc., m. 208–10° (decompn.); *dibenzoylepicupreine*, rods from petr. ether, m. 137–9°, $[\alpha]_D^{25}$ 160° (Me_2CO). I methylated with CH_2N_2 gave II, m. 111°. III. Epicupreine. *Ibid.* 555–64.—By the method described in the preceding abstrs., the authors prepd. *epicusreine* (I), $CH_2:CHC_4H_6NCH(OH)C_9H_6N(OH)$, from quinine (II). II (52 g.) and 5.5 moles *p*-$MeC_6H_4SO_2Cl$ gave 55 g. *p-toluenesulfonylquinine* (III), prisms from petr. ether, m. 88°, $[\alpha]_D^{15}$ 14° (alc.). III with aq. tartaric acid gave an oil which, purified through the dibenzoyl-*d*-tartrate and the HCl salt, gave *epiquinine* (IV), $[\alpha]_D^{15}$ 43° (abs. alc.); *HCl salt*, rods from Me_2CO, m. 125–7°, $[\alpha]_D^{15}$ 22° (alc.). IV in HOAc and HBr gave the 2 isomers of $CH_2BrCHBrC_9H_{10}N$-$CH(OH)C_9H_6N(OMe)$: α-*dibromodihydroepiquinine* (V), cryst. lumps from alc., m. 142–3° (decompn.), $[\alpha]_D^{15}$ 107°; *[d]-HBr salt*, rods from alc., m. 227° (decompn.), $[\alpha]_D^{15}$ 85° (water); *HBr salt*, prisms from alc., m. 232–4° (decompn.); $[\alpha]_D^{15}$ 68° (alc.)], and the β-*isomer* (VI), isolated as the *HBr salt*, rods from alc., m. 218–24° (decompn.), $[\alpha]_D^{15}$ −12.5°. The di-HBr salts of V and VI were converted with 67% HBr to α-*dibromodihydroepicupreine*-*HBr* (VII), prisms from water, m. 235–7° (decompn.), $[\alpha]_D^{15}$ 82° (water), and the β-*isomer* (VIII) of VII, prisms from water, m. 212–14° (decompn.), $[\alpha]_D^{15}$ 10.20°, resp. Both VII and VIII with NaI gave I, prisms from alc., m. 242° (decompn., foaming at 130°), $[\alpha]_D^{15}$ 89° (from the α-isomer) and 85° (from the β-isomer). Derivs. of I: *HBr salt*, prisms from water, m. 238° (decompn.), $[\alpha]_D^{15}$ 45° (alc.); *picrolonate*, needles from alc., m. 218–20° (decompn.); *dipicrate*, flat shafts from alc., m. 225–7° (decompn.); *methiodide*, rods from alc., m. 220–7° (decompn.), $[\alpha]_D^{15}$ 63° (alc.); *dimethiodide*, long prisms, m. 191–200° (decompn.); *dibenzoylepicupreine*, amorphous, $[\alpha]_D^{15}$ −79.2° (Me_2CO), easily alcoholyzed. I methylated with CH_2N_2 gave IV. The basicity of all the known phenolic alkaloids of the quinine group was measured electrometrically. The pH of 0.01*N* solns. of the alkaloids in 60% EtOH were as follows: *hydrocupreine* 9.3, *hydrocupreidine* 9.4, *cupreidine* 9.2, *cupreine* 9.1, *epihydrocupreine* 9.8, *epihydrocupreidine* 9.8, *epicupreidine* 9.55, *epicupreine* 9.5, *quinine* 9.47, *epiquinidine* 10.12.

Janina R. Spencer

SUSZKO, J.

Chemical Abstracts
May 25, 1954
Organic Chemistry

(3)

Preparation of 1,4-naphthalenedisulfonic and 1,4-naphthalenedisulfinic acids. M. Tuszewski and J. Suszko (Univ. Poznań, Poland). *Roczniki Chem.* 31(3), 211-7 (1952).—The prepn. of 1,4-$C_{10}H_6(SO_2H)_2$ (I) by a modification of the Cattermann method is described. 1,4-$C_{10}H_6(SO_2H)_2$ (II) is prepd. as follows: To 100 g. Na salt of I suspended in a small amt. of $POCl_3$ is slowly added 150 g. PCl_5, the mixt. heated until the salts are dissolved, the soln. allowed to stand 12 hrs., the solvent distd. off *in vacuo* and the ppt. sepd. and washed with H_2O to give a cryst. colorless chloride; recrystn. from glacial AcOH with a small amt. of bone C gives clear prismatic crystals (III), m. 162°; to 15.6 g. Zn dust suspended in 40.9 cc. 96% EtOH, and 6.3 cc. distd. H_2O is added 12.5 g. III, very slowly with energetic stirring so that the temp. is not raised above 40°, and after the reaction is completed, the mass is heated 1 hr. on a water bath with vigorous stirring, the ppt. sepd., washed several times with 96% EtOH, suspended in 90 cc. distd. H_2O, the mixt. heated to 70°, treated with 15.6 g. Na_2CO_3 in 65 cc. hot H_2O, heated 25 min., cooled, filtered, and the filtrate decolorized with C, reheated to 50°, and acidified with warm, dil. HCl; on cooling, II sps. quickly in the form of elongated rods. II is unstable and quickly turns yellow in air; it dissolves easily in pyridine, 66% EtOH, and MeOH, and m. 156–7° (decompn.).

Frank Cerny

SUSZKO, J.

"Stanislaw Glixelli" p. 1 (Wiadomosci Chemiczne, Vol. 7, No. 1, Jan. 1953, Wroclaw)

SO: Monthly List of East European Accessions, Vol. 3, No. 3 Library of Congress, March 1953, Uncl. 4

3

POL.

3107 547.942 : 547.556.7

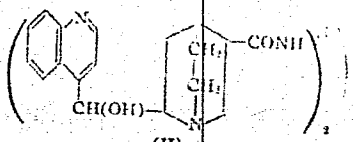
Suszko J., Domagalina E. Investigation of the Diazo-5'-Alkaloids of the Quinine Group and their Decomposition Products. I. Diazo-5'-Anhydrides.

„Badania nad dwuazo-5'-alkaloidami grupy chininy i produktami ich rozkladu. I. Dwuazo-5'-bezwodniki", Roczniki Chemii (PAN). No. 1, 1954, pp. 61—69.

It has been demonstrated that diazo compounds deriving from amine-5'-alkaloids of the quinine type form two kinds of anhydrides; the „intra-molecular" one is formed by hydrolysis of the methoxyl group, the other, „intermolecular" one is formed by the reciprocal action of diazo-systems contained in 2 molecules of alkaloid.

P O L .

Hydrazine derivatives of amino acids from the quinine group. Jerzy Suszko and Aleksander Lempka (Univ. Poznan, Poland). *Acta Polon. Pharm.* 11, 21–8 (1954) (English summary).—In contradiction to John (*C.A.* 25, 954) N_2H_4 (I) with chitenine Et ester yields *sym*-dichitenylhydrazine (II), which forms cryst. complexes with 1 mol. I, 2 mols. NH_3, and 2 mols. acetone, m. 254°, 258°, and 112°, resp. The action of HNO_2 on the complex III liberates II



(II)

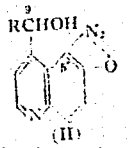
m. 171° (decompn.). Cinchotenidine Et ester, m. 164°, and I react similarly, giving *sym*-dicinchotenidylhydrazine, whose addn. compd. with 1 mole I m. 245°. 4 references.

Michael Dymicky

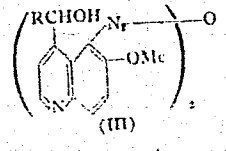
Suszko, Jerzy

POL - 5

5'-Diazo alkaloids of the quinine type and products of their decomposition. 5'-Diazo anhydrides. Jerzy Suszko and Eugenia Domagalina. *Roczniki Chem.* 28, 61–9 (1954) (German summary).—In this abstr. R = 3-ethyl-8-quinuclidinyl. Diazotization of 5'-aminodihydroquinidine (I) gave II, m. 143–5°, $[\alpha]_D^{20}$ 92°, working up the mother liquors from II gave the anhydride (III), m. 216–18° (decompn.).



(II)



(III)

Similarly 9-chloro-9-deoxy analog of I gave the corresponding 9-chloro-9-deoxy analog of II, m. 135–4°, $[\alpha]_D^{20}$ −48° and the 9-chloro-9-deoxy analog of III, m. 125–7°, $[\alpha]_D^{20}$ −135°. Diazotization of I acetate gave the corresponding III acetate, m. 140° 5-Amino-6-methoxyquinoline yielded the 5-diazo-6-methoxyquinoline anhydride, m. 119–21° and 5-diazo-6-hydroxyquinoline anhydride, m. 85°.

I. M. K.

SUSZKO, J.

Bartz, J. Studies of the symmetry of aromatic hydrocarbons. V. Mutual equivalence of peripositions in a naphthalene molecule. p. 483.
ROCZNIKI CHEMII, Warszawa, Vol. 29, no. 2/3, 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

SUSZKO, J.; WIEWIOROWSKI, M.; MEISSNER, W.

Lupanic acid and transformations of lupanine in aqueous solutions.
Bul Ac Pol chim 7 no.2:87-89 '59. (EEAI 9:7)

1. Laboratory of Organic Chemistry, A.Mickiewicz University, Poznan i Laboratory of General Chemistry, A.Mickiewicz University, Poznan.
(Lupanine) (Water) (Solutions)

SUSZKO, J.; RATAJCZAK, A.

On the synthesis of some twice-sustituted thianthrenes. Bul Ac Pol chim 7 no.5:275-278 '59. (KRAI 9:9)

1. Zaklad Chemii Organicznej, Uniwersytet im. A.Mickiewicza, Poznan i Instytut Syntezy Organicznej PAN. Vorgelegt von J.Suszko. (Thianthrene)

SUSZKO, J.; HAHN, W.

On the construction of benzocycloheptene. Bul Ac Pol chim 7 no.5: 279-283 '59. (EEAI 9:9)

1. Zaklad Chemii Organicznej, Uniwersytet im. A.Mickiewicza, Poznan.
(Benzocycloheptene)

Distr: 4E2c(j)/4E3d

Preparation and the reactions of halogen derivatives of esters of perinaphthindandionecarboxylic acid. J. Suszko and L. Wójciński (Univ. Poznań, Poland). *Bull. acad. polon. sci., Sér. sci., Chim., géol. et géograph.* 7, 383–9 (1959) (in German).—2-Ethoxycarbonylperinaphthindan-1,3-dione (2-ethoxycarbonyl-2,3-dihydro-1*H*-phenalene-1,3-dione) (I) (*CA* 31, 1794[4]) with Br in CS_2 gave a red dibromo deriv., m. 175–8°; from the filtrate a monobromo deriv., m. 185–7°, was isolated; heating with Br in CS_2 gave 2-bromo- (III) and 2,2-dibromoperinaphthindan-1,3-dione, m. 165–7° and 204–6°. 2-Chloro (IV) and 2-bromo (V) derivs. of I, m. 97–9 and 125–6°, resp., obtained by treating K salt of I with aq. Cl and Br, gave 2-chloroperinaphthindan-1,3-dione (VI), m. 180–1°, and III on treating with H_2SO_4 and with boiling AcOH, resp. With KI, IV and V quant. enolized to the K deriv. of 2-ethoxycarbonyl-3-hydroxy-1*H*-phenalen-1-one. Both afforded I on boiling with acetone. IV afforded I with hydrazine in cold EtOH. IV gave: with 1% NaOH at 50°, naphthalene-1,8-dicarboxylic acid (VII); with 10% KOH after 1 month, 80% red K deriv. of VI; with 4% KOH on 5-min. boiling, 20% VII and 80% hydroxyperinaphthindandione (putative 2-hydroxy-2,3-dihydro-1*H*-phenalene-1,3-dione), m. 259–61° (decompn.); with dry NH_3 in C_6H_6 soln., naphthalimide, m. 302–4°; and with alc. hydrazine, 1,8-naphthalenedicarboxylic acid hydrazide, m. 264–6°. IV in C_6H_6 with 2 moles 1% aq. NaOH gave 8-(β-chloro-β-ethoxycarbonyl-α-oxoethyl)-1-naphthoic acid, m. 92–4° with gas evolution at 102–4°, and loss of water at 80° *in vacuo* to give the corresponding lactone. V with KOH gave I and (or) VII; with dry NH_3 in C_6H_6 it gave naphthalimide; with $BrCH_2CO_2Et$ it gave I and $BrCH(CO_2Et)_2$.

J. Steeki

4.
1-BWC(BW)
1-HA+CNB)
2.

SUSZKO, J.; BARTZ, J.; WIEWIOROWSKI, M.

Investigations on the properties of hydroxylupanine. Bul chim PAN 8 no.2:41-44 '60. (EEAI 10:9/10)

1. Department of Organic Synthesis, Polish Academy of Sciences, Laboratory No. 5 and Department of Organic Chemistry, A. Mickiewicz University, Poznan. Presented by J. Suszko.

(Lupanine) (Hydroxy group)

SUSZKO, J.; BARTZ, J.; BRATEK, M. D.; WIEWIORSKI, M.

New methods of isolation of alkaloids from lupine seeds. Bul chim PAN 8 no.2:45-47 '60. (EEAI 10:9/10)

1. Department of Organic Synthesis, Polish Academy of Sciences, Laboratory No. 5 and Department of Organic Chemistry, A. Mickiewicz University, Poznan.

(Alkaloids) (Lupine)

SUSZKO, Jerzy; GOLANKIEWICZ, Krzysztof

Studies on the conditions of synthesis of the heteroalkaloids of the quinine group. I.,II. Prace matem przyrod Poznan 10 no.2:3-25 '62.

1. Department of Organic Chemistry, Adam Mickiewicz University, Poznan.

SUSZKO, J.; ROZWADOWSKA, M.D.

The structure of rhoeagenine and rhoeadine. Bul chim PAN 11 no.9:513-518 '63.

1. Laboratory No.5, Institute of Organic Synthesis, Polish Academy of Sciences, Warsaw. Presented by J. Suszko.

SUSZKO, J.; DEGA-SZAFRAN, Z.

Infrared spectra of cinchona alkaloids natural and modified. Pt. 1. Bul chim PAN 12 no. 2: 103-109 '64

1. Institute of Organic Synthesis, Poznan, Polish Academy of Sciences. Presented by J. Suszko.

SUSZKO, J.; DEGA-SZAFRAN, Z.

Infrared spectra of cinchona alkaloids, natural and modified. Pt.3. Bul chim PAN 9[i.e. 12] no.9:607-613 '64.

1. Laboratory of Natural Products II, Poznan, of the Institute of Organic Synthesis of the Polish Academy of Sciences. Submitted July 3, 1964.

SUSZKO, J.; GOLANKIEWICZ, B.

On the hydrogenation products of some cinchona alkaloids. Pt.2. Bul chim PAN 12 no.10:701-705 '64.

1. Laboratory of Natural Products, Poznan, of the Institute of Organic Synthesis of the Polish Academy of Sciences. Submitted August 18, 1964.

SUSZKO, J.; ROZWADOWSKA, M.D.

Structure of rhoeagenine and rhoeadine. Pt.2. Bul chim PAN 12 no.11:767-772 '64.

1. Department of Organic Synthesis, Poznan Branch, of the Polish Academy of Sciences. Submitted August 19, 1964.

WOJCIAK, T.;WOJCIECHOWSKA, M.;DOBEK, M.;SUSZKO, K.

Effect of phasin in preparation of serum agglutinins of high quality. Med. dosw. mikrob. 4 no.4:441-454 1952. (CLML 23:4)

1. Of the Institute of Pharmacology and of the Institute of Medical Microbiology of Poznan Medical Academy.

DOBEK, M.; KOMCZYNSKI, L.; RUDNICKA, M.; SUSZKO, K.; TRZEBNY, W.; WOJCIECHOWSKA, M.

The influence of isonicotine acid hydrazide upon experimental tuberculosis in guinea-pigs. Bull. Soc. amis sc. Poznan, ser. C No.4:65-78 1954.

1. Institute of Microbiology of the Medical Academy of Poznan.
(NICOTINIC ACID ISOMERS, effects,
isoniazid on exper. tuberc.)
(TUBERCULOSIS, experimental,
eff. of isoniazid)

BEDRYNSKA-DOBEK, Maria; SUSZKO, Kazimiera; WOJCIECHOWSKA, Maria; WOJCIAK, Tadeusz

Effect of phasin as a non-specific stimulus in immunization of rabbits against diphtheria. Poznan. Tow. przyjaciol nauk. wydz. lek. 14 no.1:37-44 1956.

1. Z Zakladu Mikrobiologii Lekarskiej (Kier.:Prof. dr. L. J. Adamski) i Zakladu Farmakologii (Kier.: Prof. dr. J. Dadlez) Akademii Medycznej w Poznaniu.

(DIPHTHERIA, immunology,
phasin as non-specific stimulus in immun. in rabbits (Pol))
(HEMAGGLUTINATION,
same)

RUDNICKA, M.; SUSZKO, K.; WOJCIECHOWSKA, M.

Resistance of Staphylococcus aureus to certain antibiotics according to investigations made during 1955-57. Poznan.tow.przyjaciol nauk, wydz.lek. 17 no.7:1-29 '59.
(ANTIBIOTICS pharmacol.)
(STAPHYLOCOCCUS pharmacol.)

SUSZKO,Kazimiera; WOJCIECHOWSKA,Maria; RUDNICKA,Maria

Sensitivity of Staphylococcus aureus to erythromycin with special reference to co-existing sensitivity to penicillin, streptomycin, aureomycin and chloramphenicol. Poznan.tow.przyjaciol nauk,wydz. lek. 18 no.5:5-13 '60.

(STAPHYLOCOCCUS pharmacol.)
(ERYTHROMYCIN pharmacol.)
(ANTIBIOTICS pharmacol.)

GOTZ,Regina; SUSZKO,Kazimiera

Behaviour of bacterial flora of the conjunctival sac in relation to antibiotics before bulbar surgery. Poznan.tow.przyjaciol nauk,wydz.lek. 18 no.5:17-29 '60.
(EYE surg.)
(CONJUNCTIVA microbiol.)
(ANTIBIOTICS ther.)

SUSZKO, Kazimiera

Effect of isonicotinic acid hydrazide on some enzymes of tubercle bacilli. Poznan. tow. przyjac. nauk wydz. lek. 25:243-267 '63.

(MYCOBACTERIUM TUBERCULOSIS) (CATALASE)
(PEROXIDASES) (METABOLISM) (ISONIAZID)
(PHARMACOLOGY)

SUSZKO, ROMAN

Suszko, Roman. Concerning logic without axioms. Kwartalnik Filozoficzny 17, 199–201, 319–320 (1948). (Polish. English summary)

In a formal system axioms are usually obtained by substitution in some theorems of propositional calculus. These axioms do not play an essential part in the system but are necessary as means of inference. The problem of the paper is their elimination by accepting instead certain rules of inference. The author is searching only for rules in which no premiss nor the conclusion is tautologically true. The theorem he proves states: it is sufficient to accept the following rules (1) p, $Cpq \rightarrow q$; (2) $q \rightarrow Cpq$; (3) $CCpqr \rightarrow Cqr$; (4) $CpCqr \rightarrow CCpqCpr$; (5) $Cpq \rightarrow CCrpCrqsCCrs$; (6) $CCpqr \rightarrow CNpr$; (7) $Cpq, CNqq \rightarrow q$. *H. Hiż.*

Source: Mathematical Reviews, Vol 10 No. 7

LOS, J.; SLONIMSKI, J. (Torun); SUSZKO, R. (Warszawa)

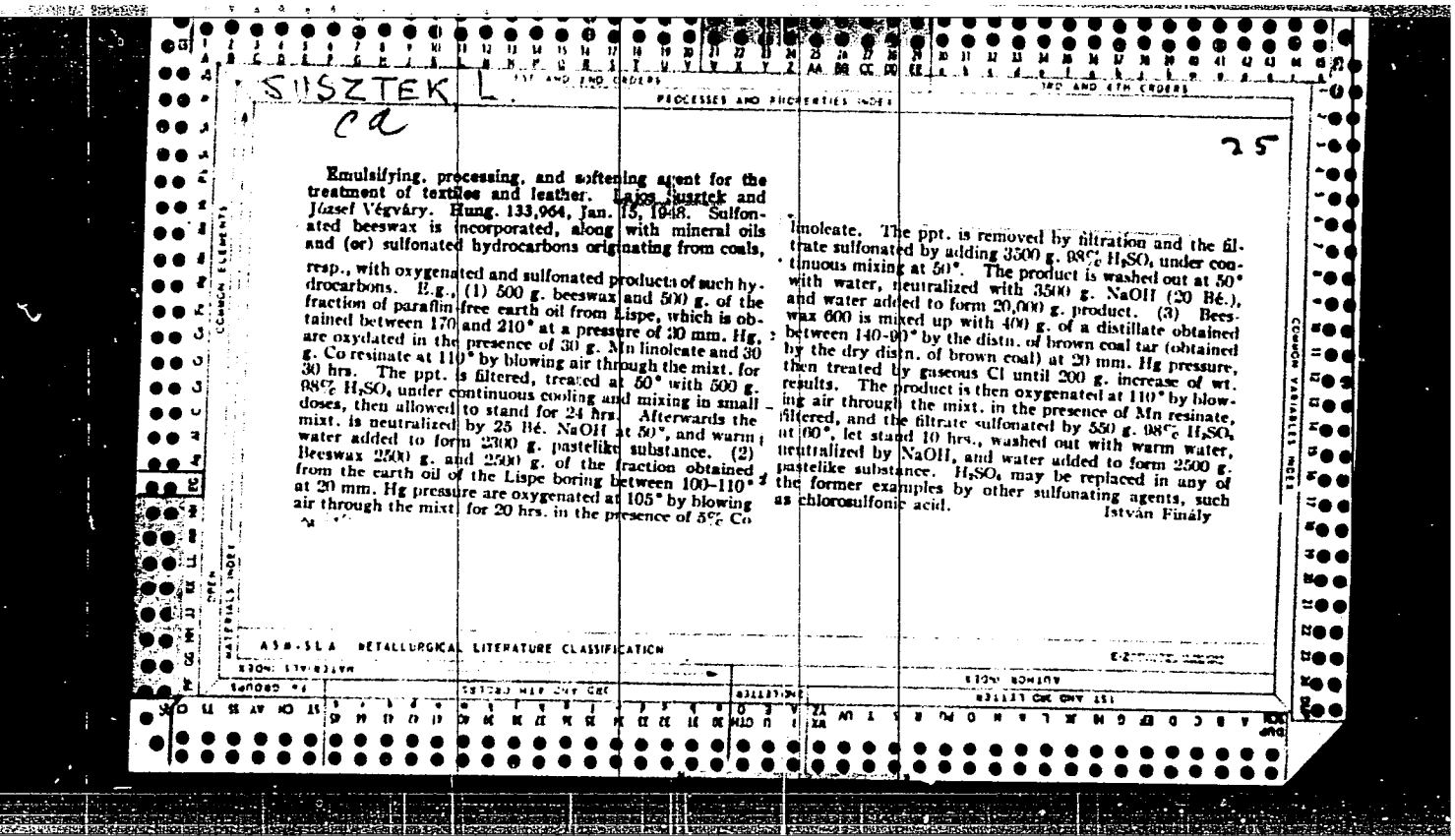
On extending of models. V. Embedding theorems for relational models.
Fund mat 48 no.2:113-121 '60. (EEAI 10:1)

1. Mathematical Institute of the Polish Academy of Sciences.
(Aggregates) (Algebra)

SUSZKO, Roman

Kazimierz Ajdukiewicz; a biography. Nauka Polska 9 no.3:69-72 '61.

1. Polska Akademia Nauk, Instytut Filozofii i Socjologii.



SUSZTEK L.

ca

25

Emulsifying, processing, and softening agent for the treatment of textiles and leather. Lajos Susztek and József Végváry. Hung. 133,964, Jan. 15, 1948. Sulfonated beeswax is incorporated, along with mineral oils and (or) sulfonated hydrocarbons originating from coals, resp., with oxygenated and sulfonated products of such hydrocarbons. E.g., (1) 500 g. beeswax and 500 g. of the fraction of paraffin-free earth oil from Lispe, which is obtained between 170 and 210° at a pressure of 20 mm. Hg, are oxydated in the presence of 30 g. Mn linoleate and 30 g. Co resinate at 110° by blowing air through the mixt. for 30 hrs. The ppt. is filtered, treated at 50° with 500 g. 98% H_2SO_4 under continuous cooling and mixing in small doses, then allowed to stand for 24 hrs. Afterwards the mixt. is neutralized by 25 Bé. NaOH at 50°, and warm water added to form 2500 g. pastelike substance. (2) Beeswax 2500 g. and 2500 g. of the fraction obtained from the earth oil of the Lispe boring between 100–110° at 20 mm. Hg pressure are oxygenated at 105° by blowing air through the mixt. for 20 hrs. in the presence of 5% Co linoleate. The ppt. is removed by filtration and the filtrate sulfonated by adding 3500 g. 98% H_2SO_4 under continuous mixing at 50°. The product is washed out at 50° with water, neutralized with 3500 g. NaOH (20 Bé.), and water added to form 20,000 g. product. (3) Beeswax 600 is mixed up with 400 g. of a distillate obtained between 140-90° by the distn. of brown coal tar (obtained by the dry distn. of brown coal) at 20 mm. Hg pressure, then treated by gaseous Cl until 200 g. increase of wt. results. The product is then oxygenated at 110° by blowing air through the mixt. in the presence of Mn resinate, filtered, and the filtrate sulfonated by 550 g. 98% H_2SO_4 at 60°, let stand 10 hrs., washed out with warm water, neutralized by NaOH, and water added to form 2500 g. pastelike substance. H_2SO_4 may be replaced in any of the former examples by other sulfonating agents, such as chlorosulfonic acid.

István Finály

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SUSZYCKI, K.

"Calculating Standards Of Heating In Poland" p. 267. (Gaz Woda I Technika Sanitarna, Vol. 27, no. 9, Sept. 1953, Warszawa,)

SO: East European Vol. 3, No. 2,
Monthly List of Russian Accessions, Library of Congress, February, 1954 1953, Uncl.

SUSZYCKI, K.

(GAZ, WODA I TECHNIKA SANITARNA, Vol. 27, No. 11, Nov. 1953, Warsaw, Poland)
"A change of established central heating temperatures" p. 318

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, L.C., Vol. 3, No. 4, APRIL 1954

SUSZYCKI, K.

"Some possibilities of lowering basic temperatures in the heating industry."
Gaz, Woda i Technika Sanitarna, Warsaw, Vol 28, No 4, Apr. 1954, p. 118

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

SUSZYCKI, PIOTR

"Konserwacja i renowacja nawierzchni klinkierowych. Warszawa, Panstwowe Wydawn. Techniczne, 1951. 7 p. (Warsaw. Instytut Techniki Budowlanej. Prace, nr. 115. Seria T: Drogi, autostrady I lotniska, nr. 18) (Conservation and repair of clinker pavements. diagrs.)"

SO: East European Accessions List, Vol 3, No. 8, Aug 1954.

SUT, Peter

Incentive effect of Hungarian wage system on the growth of the quality production. Munka 4 no.11:10-12 N'54

1. Szakszervezetok Orszagos Tanacsa Berosztalya.

Country : RUMANIA
Category: Cultivated Plants. Fruits. Berries.

M

Abs Jour: RZhBiol., No 22, 1958, No 100427

Author : Suta, A.; Modoran, I.; Dumitrache, I.
Inst : Inst. of Agricultural Research
Title : On the Study of the Root System in Fruit Trees.

Orig Pub: An. Inst. cercetari agron., 1957, 24, No 5, 429-457

Abstract: In the studies at the experiment stations of fruit growing in Voinesti, Bilcesti and Bistrita (1951-1955), it was determined that in the Tulru Gras plum trees aged 23 years, Vynet de Italia aged 19 years grated on mirabelle, and in 15-19 year old apple trees grafted on

Card : 1/4

Country : RUMANIA
Category: Cultivated Plants. Fruits. Berries.

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Abs Jour: RZhBiol., No 22, 1958, No 100427

wildings, on soils with a thin subsoil layer, the roots penetrate to the depth of 1-1.2 meters, on soils with a thick subsoil layer - to 1.8 meters. The main mass of the roots is at the depth of 20-80 centimeters. Horizontal roots spread with the radius of 6-7 meters from the trunk. The greater part of the roots extends beyond the projection of the crown by 0.5-1.5 meters. In dwarf apple tree aged 5 years, the main mass of the roots was at the depth of 10-30 centimeters; thehorizontal roots reached the depth of 25 centimeters. In the pear tree Roshioare (aged 32 years), grafted on a wilding, in deep clayey soil the

Card : 2/4

MACEK, Z.; RIEGROVA, H.; SUTA, M.

Diencephalic lesion with a picture of chronic external ophthalmoplegia and secondary myopathy. Cesk. neurol. 26 no.1:55-56 Ja '63.

1. Neurologicka katedra UDL v Praze, vedouci prof. dr. Z. Macek Neurologicka klinika fakulty vseobecneho lekarstvi KU v Praze, prednosta akademik K. Henner.

(DIENCEPHALON) (OCULOMOTOR PARALYSIS) (MUSCULAR DYSTROPHY) (ELECTROMYOGRAPHY)

DITTRICH,J.; SUTA,M.; VLACH,Vl.

Hemihypertrophy with malformation of the spinal cord. Cesk. neurol. 27 no.2:105-108 Mr'64

1. Neurologicka klinika a laborator pro patofyziologii nervove soustavy fakulty vseobecneho lekarstvi KU v Praze (prednosta: akademik K.Henner) a Oddeleni detske neurologie (vedouci: lekar doc.dr. I.Lesny).

SUTA, M.

Piston filtration method for detection of tumor cells in the cerebrospinal fluid. Cesk. neurol. 28 no.1:47-50 Ja '65

1. Laboratory pro patofyziologii nervove soustavy neurologicke kliniky fakulty vseobecneho lekarstvi Karlovy University v Praze (predmosta akademik K. Henner).

L 33493-66

ACC NR: AP6023457 SOURCE CODE: CZ/0082/66/000/002/0101/0106

AUTHOR: Suta, M.

ORG: Laboratory for Pathophysiology of the Nervous System, Neurological Clinic, Faculty of General Medicine, KU /headed by Academician K. Henner/, Prague (Laborator pro patofyziologii nervove soustavy neurologicke kliniky, fakulty vseobecneho lekarstvi KU)

TITLE: Simple apparatus for qualitative cytological examination of the cerebrospinal fluid

SOURCE: Ceskoslovenska neurologie, no. 2, 1966, 101-106

TOPIC TAGS: cytology, central nervous system, sedimentation separation, filtration, centrifuge, chemical laboratory apparatus

ABSTRACT: The author describes the apparatus which he designed for qualitative examination of the cerebrospinal fluid; it is based on the principle of a sedimentation chamber. Construction and operation of the apparatus are described. The sedimentation method may be implemented by piston filtration, and filtration by means of a centrifuge; the operation of the equipment required for these methods is given and the equipment discussed. Orig. art. has: 3 figures. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 15May65 / ORIG REF: 004 / SOV REF: 002
OTH REF: 035

Card 1/1

RUMANIA/Plant Diseases - Diseases of Cultivated Plants

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30243

Author : Savulescu, A., Bontea, V., Hulea, A., Becerescu, D., Marin, A., Suta, V., Piersica, E.

Inst : Bucharest Agricultural Institute.

Title : The Effect of Meteorological Conditions on the Formation, Appearance and Ripening of the Perithecia of Endostigme inaequalis (Cooke) Sydow and on the Dissemination of the Ascospores.

Orig Pub : Phytopathol. Z., 1956, 26, No 4, 233-376.

Abstract : Observations on the manufestation and development of the perithecia were made at Bucharest Agricultural Institute on leaves collected in October and November. Leaves in wire nets were left in the natural conditions of the orchard. From the 15 of December every 15 days one looked for the appearance of perithecia. An investigation of the processes of formation and ripening of capsules and ascospores began and were repeatedevery 3 days afterwards, when the first light

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RUMANIA/ Plant Diseases - Diseases of Cultivated Plants.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30243

capsules with uncolored ascospores appeared. Observations for the spread of the ascospores began at the beginning of March and lasted to the end of May. Five years of research indicate that E. inaequalis may develop perithecia in the leaves, if the average temperature during 1-2 months has reached -3°, the mean minimum -6° and the mean maximum 5°. Perithecia which form in large numbers on falling leaves from the end of August to the end of October are the chief source of spring infection. The ripening process of the ascospores depends on the temperature. Ripening requires an average maximum temperature for 1 month of from 1 to 12°, an average minimum of -3 or -5°. The lower the temperature within the limits indicated, the longer the ripening process takes. Precipitation shows a positive effect on this process. In the orchard the process of ripening lasts from 45 to 50 days. Precipitation and wind play a substantial role in the dissemination of the ascospores. To determine the time for spraying, it is

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RUMANIA/Plant Diseases - Diseases of Cultivated Plants.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30243

essential to consider the weather conditions, investigate the state of the perithecia in the orchard and, aside from this, to plant additional spores in the laboratory as a control.
The bibliography lists 36 titles. —K.V. Popkova.

Card 3/3

RUMANIA / General and Specialized Zoology. Insects. P
Insects and Ticks.

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78310

Authors : Manolache, C.; Suta, V.; Oancoa, M.
Inst : Rumanian AS
Title : Data on a Biological Study of the Apple Curculio (Anthonomus pomorum L.) and Methods of Its Control in Rumania.

Orig Pub : Bul. Stiint Acad RPR Sec. biol. si stiinte agric. Ser. zool., 1957 9, No 2, 195-209.

Abstract : In the years 1948-1955, observations were carried out on the distribution and biology of the Apple Curculio, and in the regions most attacked the actions of different insecticides were studied. The best results (the smallest amount of damaged buds) were obtained from a 0.15% sus-

Card 1/2

SUTA, V.

COUNTRY : Rumania
CATEGORY :

H-18

ABS. JOUR. : RZhKhim., No. 20 1959, No. 72453

AUTHOR : [illegible]valescu, A.; Bontea, V.; Focsaneanu, I. J.;
INST. : Rumanian Academy
TITLE : Effectiveness of Domestic Organomercury Preparation in Control of Apple Scab (Endostigma inaequalis (Cooke) Syd.)

ORIG. PUB. : Studii si cercetari biol. Acad. RPR Ser. biol. veget., 1958, 10, No 4, 393-40[illegible]

ABSTRACT : In testing a number of organic preparations for control of apple scab, to find a substitute for Bordeaux mixture (BM), the most effective was found to be Morphazin, containing phenylmercurochloride. The quality of fruit, their taste, contents of sugar and vitamine C, are higher than those of apples treated with BM. The preparation can be recommended for control of apple scab, at concentration of 0.2% prior to blossoming, and of 0.1% after blossom. To preclude instances of poisoning, other preparations containing no Hg should be used in the last application.
I. Mil'shteyn.

CARD:

Suta, V.; Giurea, M.

3

SUTA, V.; TUDOR, C.

Twenty years of fruitful activity in the field of land measurements in Rumania. Rev geodezie 8 no. 3:17-22 '64.

SUTAK, J.

KELEMEN, E.;MAJOROS, M.;SOLTESZ, R.;TANOS, B.;SUTAK, J.;KENDE, E.

Results of studies on sailcylates. Magy. belorv. arch. 5 no.2: 77-80 June 1952. (CIML 25:5)

1. Doctors. 2. First Internal Clinic (Director -- Prof. Dr. Geza Hetenyi), Szeged Medical University.

SUTALO, Ivan

Late results in the treatment of pulmonary tuberculosis by resection. Tuberkuloza 16 no.3:271-276 My-Ag '64

1. Bolnica za tuberkulozu pluca, Kasindo (Direktor: dr. Giunio Nenad).

SUTALO, I.

Role of bronchospirometric tests. Med. arh. 19 no.1:65-71 Ja-F '65

1. Bolnica za tuberkulozu pluca Kasindo (Direktor: Dr. Nenad Giunio).

SUTALO, Ivan

Research on the actual dosage of PAS in hospitals. Tuberkuloza, Beogr. 12 no.4:88-91 '60.

1. Bolnica za tuberkulozu pluca, Kasindo (direktor: dr N. Giunio)

(PARAAMINOSALICYLIC ACID ther)

KRUTIKOV, A.; SELISHCHEV, G.; GABIS, V.; LIBERMAN, A.; KOMNOVA, L.; BUT, I.; SUTANKIN, A.; ZHEROMSKAYA

Unremitting attention to self-service stores! Sov.torg. 33 no.7:12-13 Jl '60. (MIRA 13:7)

1. Direktor moskovskogo magazina samoobsluzhivaniya "Gastronom" No.65 (for Krutikov). 2. Direktor moskovskogo magazina samoobsluzhivaniya "Gastronom" No.64 (for Selishchev). 3. Direktor magazina No.65 Moskvoretskogo RPT (for Gabis). 4. Direktor moskovskoy bulochnoy No.44 (for Liberman). 5. Direktor moskovskoy bulochnoy No.367 (for Komnova). 6. Direktor moskovskogo magazina samoobsluzhivaniya "Mosovoshch" (for But). 7. Direktor moskovskogo magazina samoobsluzhivaniya No.78 "Mosmoloko" (for Sutankin). 8. Zamestitel' direktora magazina No.22 "Ogonek" Sverdlovskogo RPT (for Zheromskaya).

(Self-service stores)

MUKHAMEDZHANOV, M., student; TURULINA, T., studentka; PAVLOVA, N., studentka; PARSHAKOVA, V., studentka; SUTBAYEV, S., student; SIDOROV, V., student; ANDRUSEVICH, V., student; BAYMENOV, A., student; ABRAMOVICH, B., student; MALINOVSKAYA, Ye., studentka; GUDOCHKINA, L.M., assistent

Mineralogical characterisitcs of loess of Alma-Ata Province. Sbor. nauch. trud. Kaz GMI no.19:159-163 '60. (MIRA 15:3)
(Alma-Ata Province--Loess)

LYAPIN, P.F., inzh.; KOMAROV, M.I., inzh.; SUTORMIN, S.K., inzh.; CHARKIN, I.G., inzh.

Possible area of using a circular grader-conveyor as a type of actuating mechanism for the machine unit method of coal mining in the Donets Basin. Sbor. DonUGI no.33:246-259 '64. (MIRA 17:11)

POP, T., dr.; MOMICEANU, D., dr.; SUTEANU, M., biolog; ANGELESCU, N., dr.

Splenic scintigrams. Med. intern. (Bucur) 17 no.6:743-747 Je'65.

1. Lucrare efectuata in Serviciul de medicina nucleara din Clinica I de chirurgie, Spitalul "Panduri" (director: acad. Th. Burghele).

DIMITRIU, D., dr.; POP, T., dr.; SUTEANU, Maria, biolog.

Study of the single kidney with scintiscanning and quantitative fixation of neohydrin-Hg 203. Med. intern. (Bucur) 17 no.2: 165-170 F'65.

1. Lucrare efectuata in Clinica I de chirurgie, Spitalul "Panduri", Institutul medico-farmaceutic, Bucuresti (director: academician Th. Burghele).

VASILESCU,V.; CINCA,I.; DROCAN,J.; OPROIU,Al.; SUTEANU,St.

Data concerning the action of curara on the respiratory centre.
Rumanian M. Rev. 4 no.1:7-11 Ja-Mr '60.
(CURARE pharmacol.)
(RESPIRATION pharmacol.)

IOTA, C.G.; RUNCAN, V.; CHITESCU, Elena; SUTEANU, St.; ERNEST, I.

The neurovegetative syndrome in chronic hepatitis. I. Preliminary investigations. Stud. cercet. med. intern. 2 no.2:203-217 '61.
(HEPATITIS, INFECTIOUS complications)
(AUTONOMIC NERVOUS SYSTEM diseases)

MARCUS, N.; PAUN, R.; URSEA, N.; POPESCU, T.; SUTEANU, St.

Investigation of gastric secretion in chronic hepatitis. Stud. cercet. med. intern. 2 no.3:395-399 '61.
(HEPATITIS physiology) (GASTRIC JUICE chemistry)

CIOBANU, V., dr; VELICAN, Doina, dr., candidat in stiinte medicale;
SUTEANU, St., dr.

Contributions to the study of the articular manifestations of xanthomatosis. Med. intern. 13 no.12:1633-1644 D '61.

1. Lucrare efectuata in Institutul de medicina interna al Academiei R.P.R. si Ministerul Sanatatii si Prevederilor Sociale, director, acad. N.Gh. Lupu.
(LIPOIDOSIS complications) (JOINTS diseases)

CIOBANU, V.; VELICAN, Doina; SUTEANU, St.

Contributions to the study of articular manifestations in xanthomatosis. Rumanian med. rev. no.2:18-25 '62.
(XANTHOMATOSIS)

STOICA, Gh.; CIOBANU, V.; STROESCU, Ortansa; VASILIU, I.; SUTEANU, St.

Comparative value of several rheumatoid factor titration tests. I. The hemagglutination test and the fixation test using the latex of styrene-acrylonitrile copolymer. Stud. cercet. med. intern. 3 no.4: 485-494 '62.

(HEMAGGLUTINATION) (RHEUMATOID FACTOR)
(SERODIAGNOSIS)

JELEA, Al., dr.; RACOVEANU, Carmen, dr.; ILIE, E., dr.; SUTEANU, St., dr.; DUMITRESCU, C., farm.; GAVRILA, F., extern.

Contribution to the study of treatment with ∝ -chymotrypsin in bronchopulmonary diseases. Med. intern. 15 no.4:495-498 Ap '63.

1. Lucrare efectuata in Institutul de medicina interna, al Acad. R.P.R. si al M.S.P.S. (director: acad. N. Gh. Lupu).

(CHYMOTRYPSIN) (BRONCHITIS)
(PULMONARY EMPHYSEMA) (ASTHMA)
(BRONCHIECTASIS) (BRONCHIAL SPASM)

DIACONESCU, M., dr.; SUTEANU, St., dr.; SINGER, D., dr.

Considerations on some vascular allergids. Med. intern. 15 no.6:739-748 Je '63.

1. Lucrare efectuata in Institutul de medicina interna al Acad. R.P.R. (director: acad. N.Gh. Lupu) si in Policlinica M.F.A., Bucuresti.

(VASCULAR DISEASES) (ALLERGY)
(PERIARTERITIS NODOSA) (PHLEBITIS)
(ARTHRITIS, RHEUMATOID) (PERIPHLEBITIS)

CIOBANU, V., dr.; GEORGESCU, Carmen, dr.; POPESCU, Iuliu, dr.; SUTEANU, St., dr.

Pulmonary hypertrophic osteoarthropathy and rheumatoid manifestations revealing pulmonary cancer. Med. intern. 15 no.7: 829-838 Jl '63.

1. Lucrare efectuata in Institutul de medicina interna al Academiei R.P.R. si Ministerul Sanatatii si Prevederilor Sociale (director: acad. N.Gh. Lupu).

(LUNG NEOPLASMS)
(OSTEOARTHROPATHY, SECONDARY HYPERTROPHIC)
(ARTHRITIS, RHEUMATOID)

NICHIFOR, Ermil, dr.; URSEA, N., dr.; SUTEANU, St., dr.

Clinical research on chronic interstitial nephritis (chronic pyelonephritis). Med. intern. 15 no.11:1305-1312 N '63.

1. Lucrare efectuata in Clinica medicala I.M.F., Spitalul "Colentina", Bucuresti.
(NEPHRITIS, INTERSTITIAL) (PYELONEPHRITIS)
(ENDOCRINOLOGY) (ABNORMALITIES)
(URETERAL OBSTRUCTION)

RUNCAN, V., dr.; MIRON, C., dr.; VASILIU, I., dr.; CHITESCU, E., dr.; SUTEANU, St., dr.

Frequency of chronic hepatitis following epidemic hepatitis and factors in its chronicization. Med. intern. 15 no.4: 473-483 Ap '63.

1. Lucrare efectuata in Institutul de medicina interna al Acad. R.P.R. si Ministorului Sanatatii si Prevederilor Sociale (director: acad. N. Gh. Lupu).

(HEPATITIS) (HEPATITIS, EPIDEMIC)

JELEA, Al., dr.; SUTEANU, St., dr. ILIE, E., dr.; GAVRILA, F., extern.

Respiratory and digestive interrelations. Med. intern. 15 no.12: 1515-1522 D'63.

1. Lucrare efectuata in Institutul de medicina interna al Acad R.P.R. si Ministerului Sanatatii si Prevederilor Sociale (director: acad. N.Gh.Lupu).

*

RACOVEANU, Carmen, dr.; SUTEANU, St. dr.

The rheumatoid lung. Med. intern. (Bucur). 16 no.4:393-399 Ap'64

1. Institutul de medicina interna al Acad. R.P.R. si M.S.P.S. (director: acad. N.Gh. Lupu).

JELEA, Al., dr.; SUTEANU, St., dr. ILIE, E. dr.

Current status of pneumology. Med. intern. (Bucur.) 16 no.4: 487-492 Ap '64.

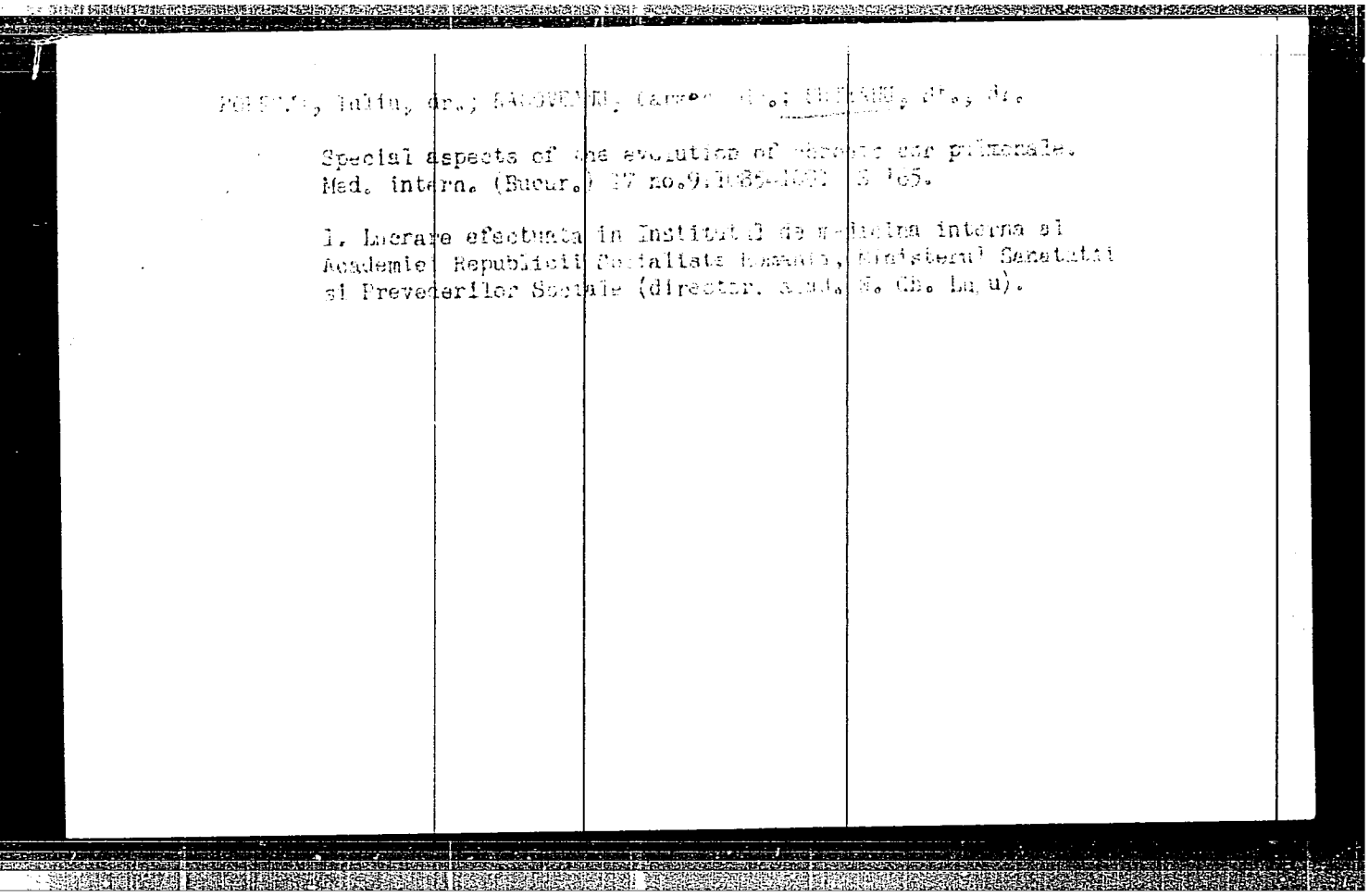
1. Clinica medicala "Colentina" (sef de disciplina, conf. R.Paun).

*

CIOBANU, V., dr.; VELICAN, C.dr.; STROESCU, O. dr.; SUTEANU, St., dr.;

Anatomoclinical study of lymphadenopathies in chronic evolutive polyarthritis. Med. intern. (Bucur.) 16 no.7:793-802 Jl'64

1. Lucrare efectuata in Institutul de medicina interna al Academiei R.P.R. si M.S.P.S. (director: acad. N.Gh.Lupu).



[illegible], Iulia, dr.; [illegible], Carmen [illegible]; [illegible], [illegible]

Special aspects of the evolution of chronic cor pulmonale.
Med. intern. (Bucur.) 17 no.9:1085-1092 S '65.

1. Lucrare efectuata in Institutul de medicina interna al Academiei Republicii Socialiste Romania, Ministerul Sanatatii si Prevederilor Sociale (director: acad. N. Gh. Lupu).

STOICA, Gh., dr.; SUTEANU, St., dr.; CIOBANU, V., dr.; STROESCU, Ortansa, dr.; DRAGOI, Tatiana, dr.; MICHIU, Valeria, asist.; SUSNEA, Doina, asist.

Changes in several blood proteins in rheumatoid polyarthritis. (Immunoelectrophoretic study). Med. intern. (Bucur.) 17 no.9: 1093-1101 S '65.

1. Lucrare efectuata in Institutul de medicina interna al Academiei Republicii Socialiste Romania si Ministerul Sanatatii si Prevederilor Sociale (director: acad. N. Gh. Lupu).

L 9504-66 EWP(f)/EWP(v)/T-2/EWP(k)/EWP(h)/EWP(l)/ETC(m) WW

ACC NR: AP6002824 SOURCE CODE: CZ/0032/65/015/001/0021/0028

AUTHOR: Sutek, L. (Engineer)

ORG: Institute of Mechanics and Automation, SAV, Bratislava (Ustav mechaniky a automatizacie SAV)

TITLE: Synthesis of bleeder turbine regulation

SOURCE: Strojirenstvi, v. 15, no. 1, 1965, 21-28

TOPIC TAGS: automatic regulation, automatic control system, steam turbine

ABSTRACT: An improved calculation method is proposed for the regulation systems of bleeder turbines, based on transfer functions between the individual quantities. The transfer functions are represented in a generalized form and can be applied to any system, provided that all the members of the regulated circuit are linear. The application of the method is demonstrated on an example of a regulation system incorporating all the elements needed to make it self-contained. Finally, a simulator is described on which it is possible to study the dynamic conditions in the regulating system, with due regard for the nonlinearities that may exist in the turbine circuits. This work was presented by Engr. B. Hanus. Orig. art. has: 7 figures and 35 formulas. [JPRS]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 001

Card 1/1

L 45431-66 EWP(k)/EWP(h)/EWP(v)/EWP(l) BC

ACC NR: AT6023976 SOURCE CODE: CZ/0000/66/000/000/0143/0156

34
B+1

AUTHOR: Sutek, L., (Engineer)

ORG: none

TITLE: Simple adaptive model for system identification

SOURCE: Slovenska akademia vied. Ustav mechaniky a automatizacie. Vyskumne problemy technickej kybernetiky a mechaniky (Research problems in technical cybernetics and mechanics). Bratislava, Vyd-vo SAV, 1965, 143-156

TOPIC TAGS: adaptive control, approximation method, random access process

ABSTRACT: The article describes a simple, adaptive, cascade-type model designed for identification of systems by determining their dynamic properties. The model uses the random-access process as the test signal and has a peak-holding controller for automatic selection of optimal parameters. The choice of the mathematical structure of the model and problems concerning optimum approximation, criteria of optimality, initial conditions, and the mode of adjusting

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