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1. Institut fiziologii im. A.A.Bogomol'tsa AN USSR, Kiyev.
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Effect of the BK-8 protein blood substitute on the process of blood coagulation in dogs during a stomach resection. Trudy Kiev. nauch.-issl. inst. perel. krovi i neotlozh. khir. 3:120-128 '61.

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1. Institute of Physiology named A.A.Bogomoletz, Academy of Sciences of the Ukrainian S.S.R.
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SPASOKUKOTSKIY, Yuriy Aleksandrovich, prof.; BARCHENKO, Liliya Ivanovna, kand. med. nauk; GENIS, Yevgeniya Danilovna, kand. med. nauk; KAVETSKIY, R.Ye., red.; BOYKO, P.V., tekhn. red.

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SPASOLOMSKAYA, A. Ye.

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SO: Knizhnaya Letopis' No. 25, 18 Jun 1955

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1. Kafedra sudebnoy meditsiny (zav. - prof. P.A. Kovoselov) Novosibirskogo meditsinskogo instituta.
(FRACTURES)

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1. Kafedra sudebnoy meditsiny (zav. - prof. F.A.Novoselov) Novosibirskogo gosudarstvennogo meditsinskogo instituta.
(APOPLEXY) (BRAIN--TUMORS) (DEATH--CAUSES)

KOSTYLEV, S.A., inzh.-geolog; DEVYATOV, V.G., inzh.-gidrotekhnik; SPASOLOMSKIY, V.V.; SYUNDYUKOV, G.M., dotsent, kand. tekhn. nauk

Deformations in the structures of buildings caused by inadmissible settling of foundations, and the reasons for their origin. Sbor. trub. Inzh.-stroi. fak. Chel. politekh. inst. no.3:183-198 '63. (MIRA 17:9)

1. Glavnyy inzh. proyektnogo instituta Chelyabinskgorproyekt (for Spasolomskiy).

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1. Dnepropetrovskiy metallurgicheskiy institut i Pridneprovskiy sovet narodnogo khozyaystva.

SPASOV, Al.
SURNAME (in caps); Given Names

Country: Bulgaria

Academic Degrees: Doctor, Professor

Affiliation: not indicated

Source: Sofia, Priroda, No 1, Jan/Feb 61, pp 3-7

Data: "The Chemistry of Chlorophyll and Recent Achievements in the Field."

SPASOV, Aleksandur
Surname (in caps); Given Names

Country: Bulgaria

Academic Degrees: not indicated

Affiliation: Teacher at the Agricultural Technological School (Selskostopanski Tekhnikum) in Pazardzhik

Source: Sofia, Biologiya i Khimiya, No 2, 1961, pp 50-52

Data: "Experiments to be Conducted with Corn"

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SPASOV, Aleksandur, uchitel, agronom

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1. Selskostopanski tekhnikum, Pazardzhik.

SPASOV, Aleksandur, uchitel-agronom

Maize and its culture. Prir i znanie 15 no.1:1-4 Ja '62.

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SPASOV, Aleksandur, uchitel-agronom

Bacterial fertilizers. Prir i znanie 15 no.4:7-10 Ap '62.

1. Selskostopanski tekhnikum, Pazardzhik.

SPASOV, Aleksandur, uchitel-agronom;

Importance of animal manure for farming. Prir i znanie 16 no.3: 1-4 Mr '63.

1. Selskostopanski tekhnikum, Pazardzhik.

SPASOV, Aleksandur, uchitel-agronom

Rice in Bulgaria. Prir i znanie 16 no.8:1-4 O '63.

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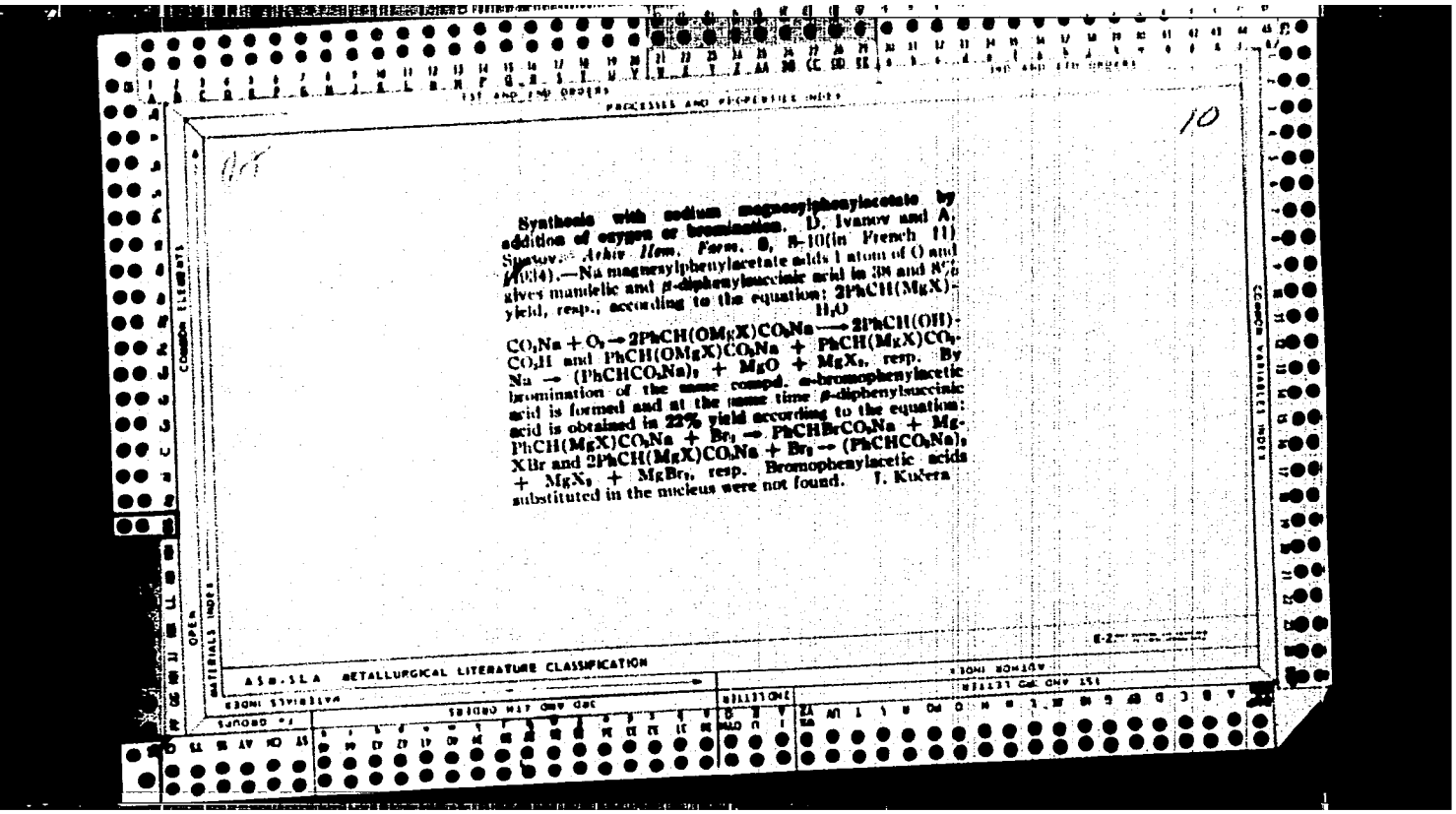
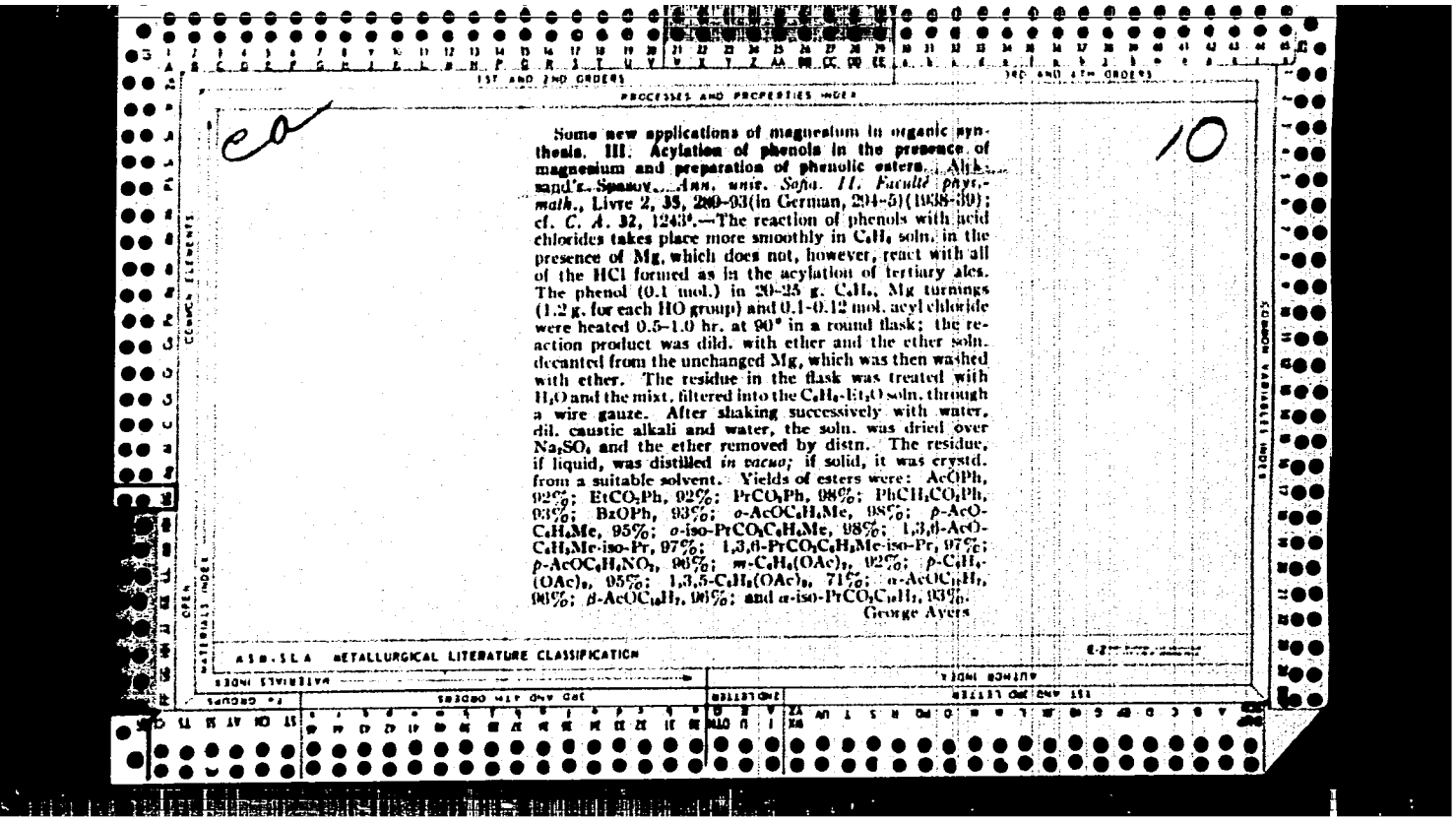
SPASOV, Al.

The soybean. Prir i znanie 17 no.10:8-9 D '64.



Synthesis with sodium magnesylphenylacetate by addition of oxygen or bromination. D. Ivanov and A. Spasov. *Arhiv Hem. Farm.* 8, 8–10(in French 11) (1934).—Na magnesylphenylacetate adds 1 atom of O and gives mandelic and β-diphenylsuccinic acid in 38 and 8% yield, resp., according to the equation: $2PhCH(MgX)CO_2Na + O_2 \rightarrow 2PhCH(OMgX)CO_2Na \xrightarrow{H_2O} 2PhCH(OH)CO_2H$ and $PhCH(OMgX)CO_2Na + PhCH(MgX)CO_2Na \rightarrow (PhCHCO_2Na)_2 + MgO + MgX_2$, resp. By bromination of the same compd. α-bromophenylacetic acid is formed and at the same time β-diphenylsuccinic acid is obtained in 22% yield according to the equation: $PhCH(MgX)CO_2Na + Br_2 \rightarrow PhCHBrCO_2Na + MgXBr$ and $2PhCH(MgX)CO_2Na + Br_2 \rightarrow (PhCHCO_2Na)_2 + MgX_2 + MgBr_2$, resp. Bromophenylacetic acids substituted in the nucleus were not found. J. Kuĕera

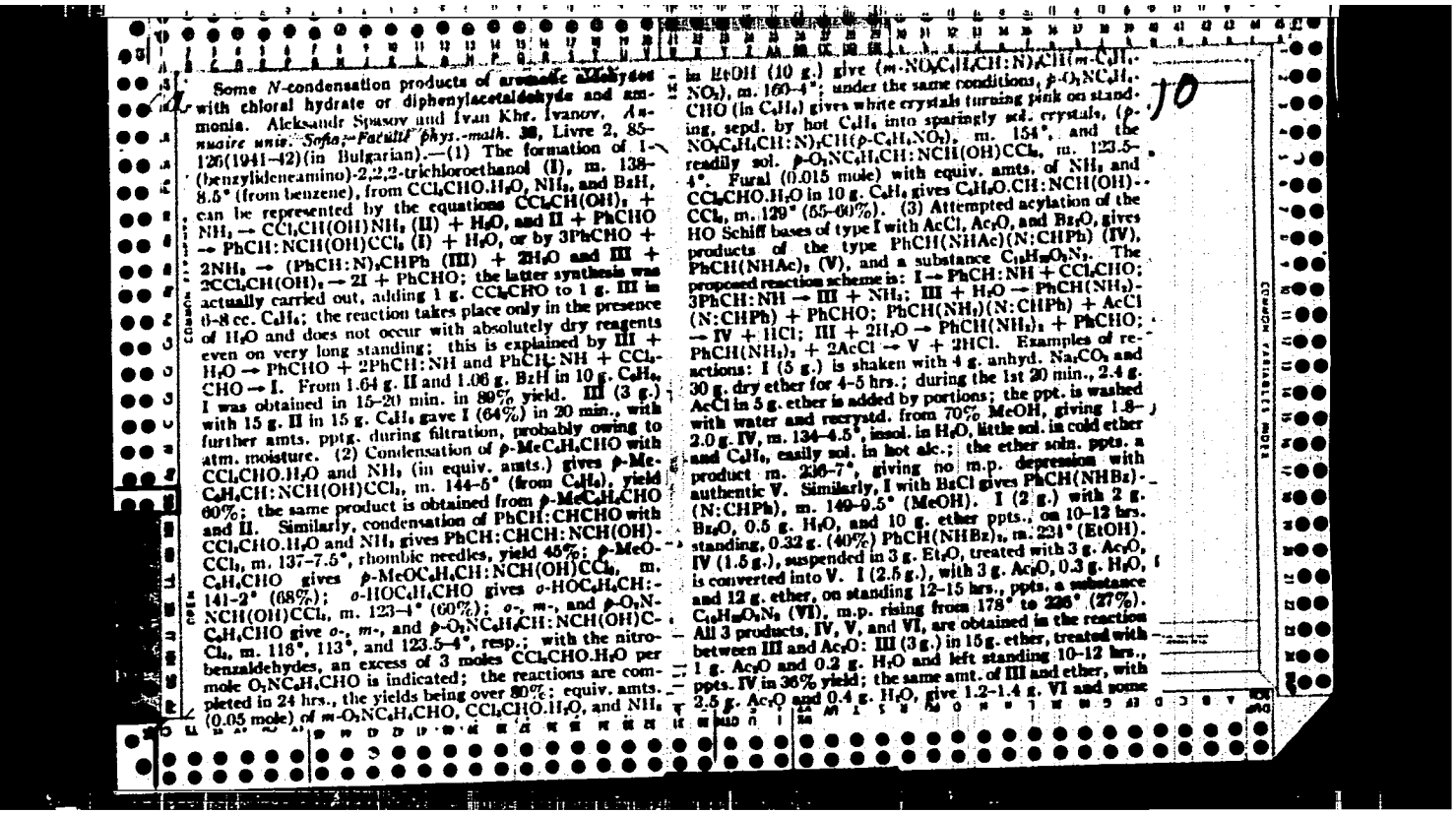


PROCESSES AND PROPERTIES INDEX

Some new applications of magnesium in organic synthesis. III. Acylation of phenols in the presence of magnesium and preparation of phenolic esters. Alex. Sand'u. Spassov. *Ann. univ. Sofia. II. Faculté phys.-math.*, Livre 2, 35, 289–93 (in German, 294–5) (1938–39); cf. *C. A.* 32, 1243⁸.—The reaction of phenols with acid chlorides takes place more smoothly in C_6H_6 soln. in the presence of Mg, which does not, however, react with all of the HCl formed as in the acylation of tertiary alcs. The phenol (0.1 mol.) in 20–25 g. C_6H_6, Mg turnings (1.2 g. for each HO group) and 0.1–0.12 mol. acyl chloride were heated 0.5–1.0 hr. at 90° in a round flask; the reaction product was dild. with ether and the ether soln. decanted from the unchanged Mg, which was then washed with ether. The residue in the flask was treated with H_2O and the mixt. filtered into the C_6H_6-Et_2O soln. through a wire gauze. After shaking successively with water, dil. caustic alkali and water, the soln. was dried over Na_2SO_4 and the ether removed by distn. The residue, if liquid, was distilled *in vacuo*; if solid, it was crystd. from a suitable solvent. Yields of esters were: AcOPh, 92%; $EtCO_2Ph$, 92%; $PrCO_2Ph$, 98%; $PhCH_2CO_2Ph$, 93%; BzOPh, 93%; *o*-$AcOC_6H_4Me$, 98%; *p*-$AcOC_6H_3Me$, 95%; *o*-iso-$PrCO_2C_6H_4Me$, 98%; 1,3,6-$AcOC_6H_3Me$-iso-Pr, 97%; 1,3,6-$PrCO_2C_6H_3Me$-iso-Pr, 97%; *p*-$AcOC_6H_4NO_2$, 96%; *m*-$C_6H_4(OAc)_2$, 92%; *p*-$C_6H_4(OAc)_2$, 95%; 1,3,5-$C_6H_3(OAc)_3$, 71%; α-$AcOC_{10}H_7$, 96%; β-$AcOC_{10}H_7$, 96%; and α-iso-$PrCO_2C_{10}H_7$, 93%.

George Ayers

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



Some *N*-condensation products of aromatic aldehydes with chloral hydrate or diphenylacetaldehyde and ammonia. Aleksandr Spasov and Ivan Khr. Ivanov. *Annuaire univ. Sofia, Faculté phys.-math.* **38**, Livre 2, 85–126(1941–42)(in Bulgarian).—(1) The formation of 1-(benzylideneamino)-2,2,2-trichloroethanol (I), m. 138–8.5° (from benzene), from $CCl_3CHO.H_2O$, NH_3, and BzH, can be represented by the equations $CCl_3CH(OH)_2 + NH_3 \rightarrow CCl_3CH(OH)NH_2$ (II) + H_2O, and II + PhCHO → PhCH:NCH(OH)CCl_3 (I) + H_2O, or by 3PhCHO + $2NH_3 \rightarrow (PhCH:N)_2CHPh$ (III) + $2H_2O$ and III + $2CCl_3CH(OH)_2 \rightarrow 2I$ + PhCHO; the latter synthesis was actually carried out, adding 1 g. CCl_3CHO to 1 g. III in 6–8 cc. C_6H_6; the reaction takes place only in the presence of H_2O and does not occur with absolutely dry reagents even on very long standing; this is explained by III + $H_2O \rightarrow$ PhCHO + 2PhCH:NH and $PhCH_2NH + CCl_3CHO \rightarrow$ I. From 1.64 g. II and 1.06 g. BzH in 10 g. C_6H_6 I was obtained in 15–20 min. in 89% yield. III (3 g.) with 15 g. II in 15 g. C_6H_6 gave I (64%) in 20 min., with further amts. pptg. during filtration, probably owing to atm. moisture. (2) Condensation of *p*-MeC_6H_4CHO with $CCl_3CHO.H_2O$ and NH_3 (in equiv. amts.) gives *p*-MeC_6H_4CH:NCH(OH)CCl_3, m. 144–5° (from C_6H_6), yield 60%; the same product is obtained from *p*-MeC_6H_4CHO and II. Similarly, condensation of PhCH:CHCH:NCH(OH)$CCl_3CHO.H_2O$ and NH_3 gives PhCH:CHCH:NCH(OH)CCl_3, m. 137–7.5°, rhombic needles, yield 45%; *p*-MeOC_6H_4CHO gives *p*-$MeOC_6H_4CH$:NCH(OH)CCl_3, m. 141–2° (68%); *o*-HOC_6H_4CHO gives *o*-HOC_6H_4CH:NCH(OH)CCl_3, m. 123–4° (60%); *o*-, *m*-, and *p*-$O_2NC_6H_4CHO$ give *o*-, *m*-, and *p*-$O_2NC_6H_4CH$:NCH(OH)CCl_3, m. 118°, 113°, and 123.5–4°, resp.; with the nitrobenzaldehydes, an excess of 3 moles $CCl_3CHO.H_2O$ per mole $O_2NC_6H_4CHO$ is indicated; the reactions are completed in 24 hrs., the yields being over 80%; equiv. amts. (0.05 mole) of *m*-$O_2NC_6H_4CHO$, $CCl_3CHO.H_2O$, and NH_3 in EtOH (10 g.) give (*m*-$NO_2C_6H_4CH$:N)$_2CH(m$-$C_6H_4NO_2$), m. 160–4°; under the same conditions, *p*-$O_2NC_6H_4CHO$ (in C_6H_6) gives white crystals turning pink on standing, sepd. by hot C_6H_6 into sparingly sol. crystals, (*p*-$NO_2C_6H_4CH$:N)$_2CH(p$-$C_6H_4NO_2$), m. 154°, and the readily sol. *p*-$O_2NC_6H_4CH$:NCH(OH)CCl_3, m. 123.5–4°. Fural (0.015 mole) with equiv. amts. of NH_3 and $CCl_3CHO.H_2O$ in 10 g. C_6H_6 gives $C_4H_3O.CH$:NCH(OH)CCl_3, m. 129° (55–60%). (3) Attempted acylation of the HO Schiff bases of type I with AcCl, Ac_2O, and Bz_2O, gives products of the type PhCH(NHAc)(N:CHPh) (IV), $PhCH(NHAc)_2$ (V), and a substance $C_{18}H_{18}O_3N_2$. The proposed reaction scheme is: I → PhCH:NH + CCl_3CHO; 3PhCH:NH → III + NH_3; III + $H_2O \rightarrow PhCH(NH_2)$-(N:CHPh) + PhCHO; $PhCH(NH_2)$(N:CHPh) + AcCl → IV + HCl; III + $2H_2O \rightarrow PhCH(NH_2)_2$ + PhCHO; $PhCH(NH_2)_2 + 2AcCl \rightarrow V + 2HCl$. Examples of reactions: I (5 g.) is shaken with 4 g. anhyd. Na_2CO_3 and 30 g. dry ether for 4–5 hrs.; during the 1st 20 min., 2.4 g. AcCl in 5 g. ether is added by portions; the ppt. is washed with water and recrystd. from 70% MeOH, giving 1.8–2.0 g. IV, m. 134–4.5°, insol. in H_2O, little sol. in cold ether and C_6H_6, easily sol. in hot alc.; the ether soln. ppts. a product m. 236–7°, giving no m.p. depression with authentic V. Similarly, I with BzCl gives PhCH(NHBz)-(N:CHPh), m. 149–9.5° (MeOH). I (2 g.) with 2 g. Bz_2O, 0.5 g. H_2O, and 10 g. ether ppts., on 10–12 hrs. standing, 0.32 g. (40%) $PhCH(NHBz)_2$, m. 224° (EtOH). IV (1.5 g.), suspended in 3 g. Et_2O, treated with 3 g. Ac_2O, is converted into V. I (2.5 g.), with 3 g. Ac_2O, 0.3 g. H_2O, and 12 g. ether, on standing 12–15 hrs., ppts. a substance $C_{16}H_{16}O_3N_2$ (VI), m.p. rising from 178° to 226° (27%). All 3 products, IV, V, and VI, are obtained in the reaction between III and Ac_2O: III (3 g.) in 15 g. ether, treated with 1 g. Ac_2O and 0.2 g. H_2O and left standing 10–12 hrs., ppts. IV in 36% yield; the same amt. of III and ether, with 2.5 g. Ac_2O and 0.4 g. H_2O, give 1.2–1.4 g. VI and some

IV. (4) The bases of type I are suitable for purposes of identification of aromatic aldehydes and their separation from aliphatic aldehydes, which form no cryst. products with CCl_3CHO and NH_3; thus, PhCHO can be detected in the presence of a 7:1 excess of EtCHO and a 4:1 excess of PrCHO. (5) Detns. of mol. wt., M, of the type I bases give correct values only in low-melting solvents (e.g., $PhNMe_2$, $PhNO_2$); the values are distinctly too low in higher-melting solvents (Ph_2NH, C_6H_6, phenanthrene); this may be ascribed to a dissocn., I ⇌ PhCH:NH + CCl_3CHO, borne out by the concn. dependence of M; thus, I in C_6H_6, 0.7, 2.5, and 4.5%, gives an M of 245, 257, and 270, resp. (true M, 279). (6) Condensations of Ph_3CCHO (VII) with aromatic aldehydes and NH_3 lead to several well-defined products. Without solvent, VII 4 g., PhCHO 3.1 g., and 25% NH_4OH 1.6 g. (0.02:0.03:0.03 mol.) gave Ph_3C:CHNHCH:CPh_3 (VIII), m. 144–5°. In C_6H_6 (15 g.), 5.8 g. VII, 3.1 g. PhCHO, and 5 g. 25% NH_4OH gave, besides some VIII, mainly PhCH:NCH:CPh_3 (IX), yellow needles, m. 131–2° (36%), insol. in H_2O, little sol. in ether and alc. IX (2 g.) in 6 g. ether with 6 g. Ac_2O and 1 g. H_2O gives, after 24 hrs., Ph_3C:$CHNH_2$, m. 163–4° (35–40%). VII (5 g.) with 10 cc. 25% NH_4OH gives VIII (40–50%). VII (2 g.) in 10 g. C_6H_6 with 3.2 g. CCl_3CHO.H_2O and 1 g. concd. NH_4OH pptd., after 15–20 min., a product, m. 109–11° (EtOAc), which is hydrolyzed by HCl into CCl_3CHO, NH_3, and VIII, and is thus assumed to be CCl_3CH:NCH(OH)$CHPh_2$. N. Thon

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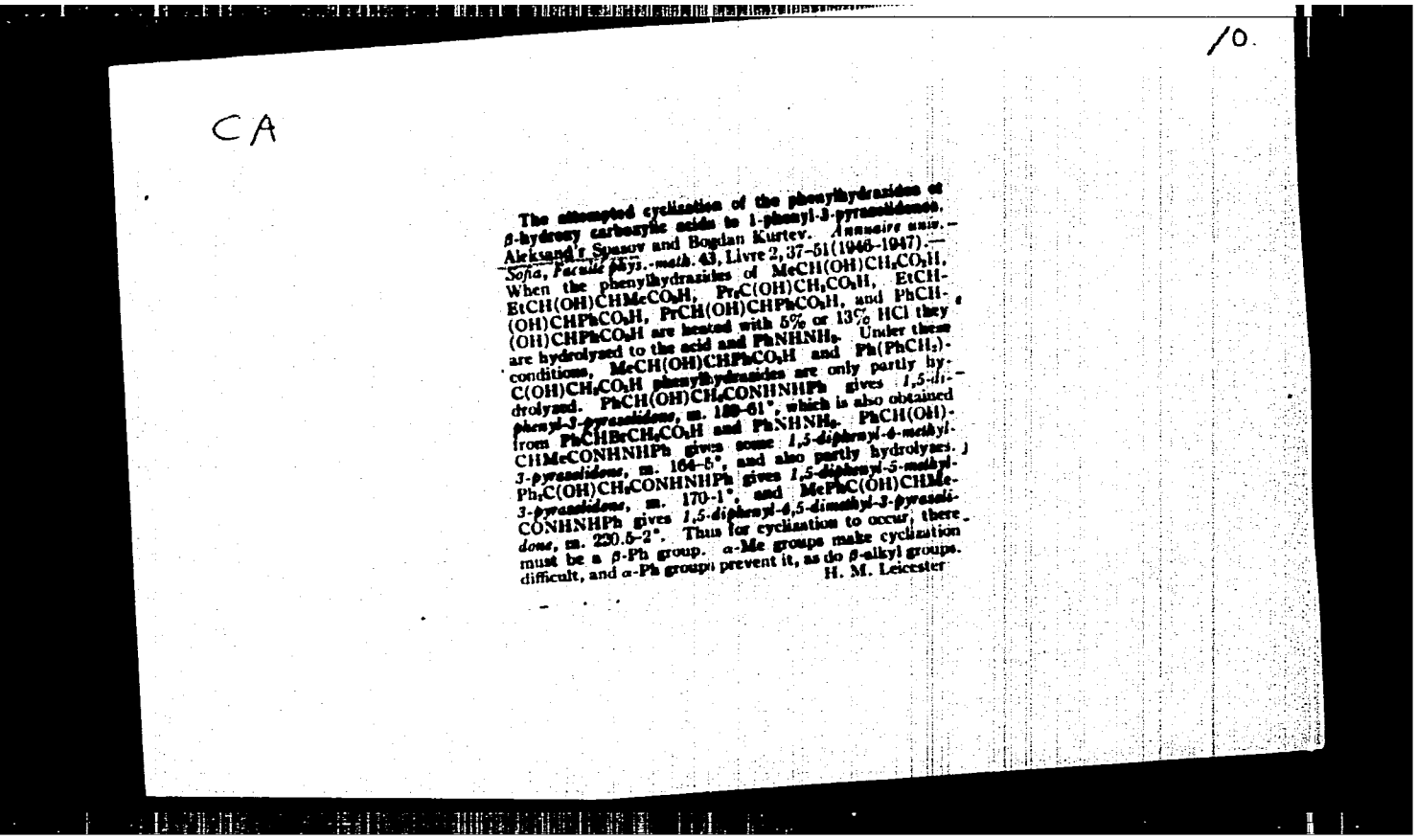
Detection, identification, and separation of aromatic aldehydes in mixtures with other carbonyl compounds by chloral hydrate and ammonia. Aleksandŭr Spasov and Ivan Chr. Ivanov. *Izvestiia nauch.-issled. zemled. Opytn. stan.* **43**, Livre 2, 1-36(1946-1947); cf. C.A. **42**, 2544i. BzH reacts with $CCl_3CH(OH)_2$ and NH_3 at 0° to give $PhCH:NCH(OH)CCl_3$, m. 130-8.5°. Under these conditions most aliphatic and aromatic ketones do not react and aliphatic aldehydes give noncryst. compds. Hence the reaction can be used to detect or sep. aromatic aldehydes. BzH can be detected when it comprises 13.2% of a mixt. with EtCHO, 14.0% with PrCHO, 15.5% with iso-PrCHO, 12.3% with Me_2CO, 0.2% with Pr_2CO, 5.0% with MePhCO, 5.5% with Ph_2CO, and 5.0% with $(PhCH_2)_2CO$. *p*-MeC_6H_4CHO gives an analogous compd. m. 141-5.5°, for which the corresponding figures are 20.5, 17.2, 19.2, 12.1, 8.0, 8.3, 7.6, 8.7. For $C_6H_5OCH:NCH(OH)CCl_3$, m. 120°, the values are 12.1, 11.7, 11.7, 17.1, 6.5, 8.2, 5.5, 7.1; for $PhCH:CHCH:NCH(OH)CCl_3$, m. 137-7.5°, 12.4, 10.3, 10.9, 10.2, 6.0, 6.1, 4.9, 5.4; for *p*-$MeOC_6H_4CH:NCH(OH)CCl_3$, m. 141-2°, 17.6, 17.3, 21.2, 10.4, 8.4, 9.3, 8.5, 9.7; and for *o*-$HOC_6H_4CH:NCH(OH)CCl_3$, m. 123-4°, 34.1 39.8, 36.1, 20.6, 21.1, 16.9, 18.2, 16.2.

H. M. Leicester



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The attempted cyclization of the phenylhydrazides of β-hydroxy carboxylic acids to 1-phenyl-3-pyrazolidones. Aleksandŭr Spasov and Bogdan Kurtev. *Annuaire univ. Sofia, Facult. phys.-math.* 43, Livre 2, 37–51(1946–1947).—When the phenylhydrazides of $MeCH(OH)CH_2CO_2H$, $EtCH(OH)CHMeCO_2H$, $Pr_2C(OH)CH_2CO_2H$, $EtCH(OH)CHPhCO_2H$, $PrCH(OH)CHPhCO_2H$, and $PhCH(OH)CHPhCO_2H$ are heated with 5% or 13% HCl they are hydrolyzed to the acid and $PhNHNH_2$. Under these conditions, $MeCH(OH)CHPhCO_2H$ and $Ph(PhCH_2)C(OH)CH_2CO_2H$ phenylhydrazides are only partly hydrolyzed. $PhCH(OH)CH_2CONHNHPh$ gives *1,5-diphenyl-3-pyrazolidone*, m. 180–81°, which is also obtained from $PhCHBrCH_2CO_2H$ and $PhNHNH_2$. $PhCH(OH)CHMeCONHNHPh$ gives some *1,5-diphenyl-4-methyl-3-pyrazolidone*, m. 164–5°, and also partly hydrolyzes. $Ph_2C(OH)CH_2CONHNHPh$ gives *1,5-diphenyl-5-methyl-3-pyrazolidone*, m. 170–1°, and $MePhC(OH)CHMeCONHNHPh$ gives *1,5-diphenyl-4,5-dimethyl-3-pyrazolidone*, m. 230.5–2°. Thus for cyclization to occur, there must be a β-Ph group. α-Me groups make cyclization difficult, and α-Ph groups prevent it, as do β-alkyl groups.

H. M. Leicester

The reaction of phenylhydrazine with β-hydroxy carboxylic acids. II. Aleksand'r Spasov and Bogdan Kurtev. *Annuaire univ. Sofia, Faculté phys.-mat.* **43**, Livre 2, 147–62(1946–1947); cf. *C.A.* **38**, 2334⁸.—Most β-HO carboxylic acids form phenylhydrazides with $PhNHNH_2$ (I), but in a side reaction I decomp. to C_6H_6, $PhNH_2$, NH_3, and N_2, and sometimes this reaction prevents detection of the phenylhydrazides. $Pr_2C(OH)CH_2CO_2H$ and I form the *salt*, m. 93–6°, at room temp. When heated at 140–5° they give 45% of the *phenylhydrazide*, m. 73–6°. NH_3 and $PhNH_2$ are found in the mixt. $Ph(PhCH_2)C(OH)CH_2CO_2H$ (II) and I form the *salt*, m. 105–7°, and on heating give the *phenylhydrazide*, m. 146–7.5°, as well as the *NH_3 salt*, m. 163–5°, and the *$PhNH_2$ salt*, m. 122.5–3.5°, of II. $MeCH(OH)CHMeCO_2H$ and I give only the *phenylhydrazide*, m. 147.5–8°. $EtCH(OH)CHMeCO_2H$ gives 35–6% of its *phenylhydrazide*, m. 161–1.5°. $Me_2C(OH)CHMeCO_2H$ gives its I *salt*, m. 110.5–11.5°, and from the reaction mixt. only the *NH_3 salt*, m. 153–3.5°. $MeEtC(OH)CHEtCO_2H$ gives no definite products. $MePhC(OH)CHMeCO_2H$, m. 65–7°, gives the I *salt*, m. 133–3.5°, *NH_3 salt*, m. 160° (decompn.), *$PhNH_2$ salt*, m. 116–17°, and *phenylhydrazide*, m. 188–91°. $Me(p\text{-}MeC_6H_4)C(OH)CHMeCO_2H$ gives the I *salt*, m. 125.5–6°, and the *NH_3 salt*, m. 172–3° (decompn.). $Ph_2C(OH)CHMeCO_2H$ gives only decompn. products of I. $Pr_2C(OH)CHPhCO_2H$ gives only $PhCH_2CONHPh$, m. 117°.

H. M. Leicester

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Condensation of dichloroacetaldehyde with aromatic aldehydes and ammonia. Aleksand'r Simov and Ivan Ivanov. *Annuaire univ. Sofia, Faculté sci.* **44**, Livre 2, 157–61(1947–48).—It has been established that Cl_2CH-CHO (I) may be condensed with aromatic aldehydes and NH_3 to form mixed aldehyde-NH_3 compds. with the structure ArCH:NCH(OH)$CHCl_2$ (II). Their compn. agrees with this structure; they behave like I, chloral hydrate, and Ph_2CHCHO, which form Schiff HO bases with aromatic aldehydes and NH_3. This behavior of the above aldehydes depends perhaps upon the neg. Cl atom or the Ph group present. The II were prepd. by treatment of equiv. quantities of the 2 aldehydes in C_6H_6 with aq. NH_3 with cooling. They are hard, cryst., unstable substances, decompg. after a few hrs. at the usual temp. Only at lower temps. do they remain undecompd. for a longer time. The furfurylidene compd. is relatively more stable. The II were quantitatively hydrolyzed to I, splitting off the aromatic aldehyde and NH_3, by dil. HCl. $PhCH(NHOCCH_3)_2$, from Ac_2O in Et_2O soln., m. 236°. The following II were prepd. (ArCH given): *benzylidene*, m. 66–7°; *cinnamylidene*, m. 97.5–8°; *furfurylidene*, m. 111–12°. Anisaldehyde and p-MeC_6H_4CHO give under similar conditions only viscous, noncrystallizable condensation products. F. S. Boig

Spasov, AL

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The isomeric forms of benzil phenylosazone. IV. Reduction of benzil osotetrazine. AL. Spasov and St. Robev. *Bull. inst. chim. acad. bulgare sci.* 2, 9-29(1953); cf. C.A.

47, 2154a.—A suspension of 0.1 g. CPh:N.(NPh)$_2$.N:CPh (I) in 3 ml. PhNHNH$_2$ was heated to 200° and the mixt. dild. with EtOH to give crystals of β-benzil phenylosazone (β-II), m. 210–2°. Reduction of 1.0 g. I in 80 ml. Et$_2$O by shaking 0.5 hr. with 0.4 g. Pd over C gave β- and γ-II and triphenylosotriazole (III), m. 130–3°; in CHCl$_3$-EtOH-H$_2$O (10:10:1) as solvent, 25% β-II and 18% III was obtained; 6 hrs. shaking gave only 4% β-II and 88% III with a small amt. of PhNH$_2$. Reduction of 0.5 g. I suspended in 25 ml. EtOH with 5 ml. of 50% or 15 ml. of 10% KOH contg. 1 g. Zn dust gave 0.4 g. β-II and a little γ-II; in Ac$_2$O-MeOH as solvent 0.1 g. III was also isolated; attempted reduction of β-II under same conditions failed to give III. Reduction of I with colorless ammonium sulfide also gave β-II, γ-II, and III. When H$_2$S was bubbled through a soln. of I in EtOH at reflux temp. for 3 hrs., besides β-II and III a S contg. compd.; $C_{26}H_{18}N_4S$ (IV) was obtained; when H$_2$S was bubbled for only 2–3 min., a large amt. of IV, orange crystals, m. 123–4°, sepd. IV treated with (NH$_4$)$_2$S gave III after acidification with HCl; reduction of IV with Zn and AcOH also gave III. V. The cyclization of α- and β-benzil phenylosazones to 2,4,5-triphenylosotriazole. Catalytic cyclization with palladium on carbon.

SPASOV, AL

Ibid., 23-36.—Cyclization expts. carried out in Et_2O, Ac_2O, EtOAc, C_6H_6, and EtOH-$CHCl_3$-H_2O mixt. with Pd over charcoal as catalyst showed that the β-form of benzil phenylosazone, m. 234°, forms triphenylosotriazole faster than the α-form, m. 218°; therefore the β- and α-forms must represent the *syn* and *anti* forms, resp. The catalyst (0.25–0.5 g.) was suspended in a soln. of 0.5–1.0 g. II in 30 ml. solvent, the mixt. refluxed from 36 to 48 hrs., the product was filtered hot, the filtrate evapd. to dryness, and the residue taken up with the solvent to dissolve the triazole, while the unreacted II remained insol. G. Meguerian

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SPASOV, Al.

BULG.

Elimination of arsenic from the phenarsazine nucleus. A new method for the preparation of tetrachlorophenothiazine. Al. Spasov and M. Zhechev. *Bull. Inst. Chim. Acad. Bulgare Sci.*, 2, 67-74(1953).—Finely powdered 10-chloro-5,10-dihydrophenarsazine (1 g.) was treated with 3 ml. S_2Cl_2, and following the violent reaction, the mixt. was left 5 min. at room temp. and then heated 5 min. at 140-50°. On cooling, crystals sepd. which were recryst. from $PhNH_2$ or C_6H_6 to give 55-60% *3,4,5,7-tetrachlorophenothiazine* (I), m. 232-3°. I with 30% H_2O_2 gave the *oxide*, m. 220°. Similarly were treated bis(5,10-dihydrophenarsazine) oxide, and the following 5,10-dihydrophenarsazines to give the corresponding I: 10-Me, 10-MeO, 10-PhO, and 10-Ac.

G. Meguerian

Spasov, Al.

New uses of sodium amide in organic syntheses. III. A new variant of the Perkin reaction—preparation of β-arylacrylic acids. Al. Spasov, St. Robev, and D. Popov. *Compt. rend. acad. bulgare sci.* 7, No. 1, 41–4(1954)(in German); cf. *C.A.* 49, 9182f.—To a soln. of 1.2 g. of AcOH in 15 cc. of xylene (Na-dried) is added 2.3 g. powd. $NaNH_2$ in 15 cc. xylene, and the mixt. heated 10 min. in a 145–50° bath. After the addn. of 0.04 mole of an anil $ArCH:NAr'$, heating is continued 3–4 hrs., cold H_2O (150 cc.) is added, and the aq. layer Et_2O-washed, treated with C, and acidified (with dil. HCl). The acrylic acid (I), $ArCH:CHCO_2H$, is pptd. and a small addnl. amt. is extd. from the filtrate with Et_2O. Given are Ar, Ar', m.p. of I, % yield: Ph, Ph, 132–3° (H_2O-alc.), 53; Ph, *p*-$MeOC_6H_4$, —, 58; *α*-$C_{10}H_7$, Ph, 204–6° (alc.), 55; *β*-$C_{10}H_7$, *o*-$MeOC_6H_4$, —, 65. The reaction mechanism is discussed. G. L. Sutherland

SPASOV, AL

Some new applications of sodamide in organic syntheses. I. Preparation of α,β,γ-triarylglutaric acids. AL Spasov and St. Robev. *Bull. inst. chim. acad. bulgare sci.* 2, 37–52 (1953); *Doklady Akad. Nauk S.S.S.R.* 95, 559–61(1954). —$PhCH_2CO_2H$ (I) (3.2 g.) was treated with 1.9 g. $NaNH_2$ in 50 ml. anhyd. C_6H_6, then 3.6 g. PhCH:NPh was added and the mixt. refluxed 4 hrs.; the product was dissolved in H_2O, extd. with Et_2O and acidified with HCl to ppt. the acids, which were then taken up in C_6H_6; *α,β,γ-triphenylglutaric acid* (II), m. 230–7°, being insol. was sepd. in 61.5% yield; the soln. also gave 6.5% *α-phenylcinnamic acid* (III), m. 169–70°. Similarly, in 4–5 hrs. *N*-benzylidene-α-naphthylamine and I gave 40% II and 6% III; if the reaction is stopped after 2 hrs., α-$C_{10}H_7NHCHPhCHPh$-CO_2H, m. 158–60°, is isolated (HCl salt, m. 191–2°), *p*-MeC_6H_4CH:NPh and I yielded 60% *α,γ-diphenyl-β-(p-tolyl)glutaric acid*, m. 223° and 8% *α-phenyl-β-(p-tolyl)-acrylic acid*; hydrogenation of the latter gave the dihydro deriv., m. 161°. α,β-Diphenyl-γ-(3,4-methylenedioxyphenyl)glutaric acid, m. 233–4° (from EtOH), was similary prepd. To a boiling mixt. of 2.3 g. III, 2.0 g. I, and 2.4 g. $NaNH_2$ in 50 ml. C_6H_6, 5 g. $PhNH_2$ was added and the mixt. refluxed 3 hrs. under an atm. of H. The reaction product was dissolved in H_2O, boiled with activated C and acidified with HCl; the sepd. acids were then dried and taken up in CS_2 leaving 1.2 g. insol. II. II. Preparation of *α,β-diaryl-β-(N-aryl)aminopropionic acids*. *Bull. inst. chim. acad. bulgare sci.* 2, 53–66(1953); *Doklady Akad. Nauk S.S.S.R.* 95, 817–19(1954).—A suspension of 0.022 mole $R'CH_2CO_2Na$ (IV) in 100–120 ml. C_6H_6 or Et_2O was treated

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SPASOV, AL.

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with 0.04 mole RCH=NHR' anil deriv. in 15–20 ml. solvent in the presence of $NaNH_2$ and under reflux. When the suspension had almost disappeared (10–15 min. in C_6H_6 and 1 hr. in Et_2O), 100 g. ice and 25 g. NH_4Cl was added to the mixt., the ppt. filtered, suspended in H_2O and treated with excess dil. AcOH; the ppt'd $RCH(NHR')CHR''CO_2H$ (V) was recrystd. from alc. The following V were prepd. (R, R', R'', and yields are given): *Ph*, *Ph*, *Ph*, m. 171–2°, 46% from PhCH:NPh (*HCl-salt*, m. 196–7°); *p*-tolyl, *Ph*, *Ph*, m. 181–2°, 52% from *p*-$CH_3C_6H_4CH$:NPh; *Ph*, *p-tolyl*, *Ph*, m. 189–90°, 55% from PhCH:$NC_6H_4CH_3$; *Ph*, *α-naphthyl*, *Ph*, m. 158–60°, 57% from PhCH:$NC_{10}H_7$ (HCl-salt, m. 190–2°).

G. Meguerian

SPASOV, Al.; ROBEV, St.

Some new applications of sodium amide in organic synthesis; production of α-, β-, γ-triaryl glutaric acids. Dokl.AN SSSR 95 no.3:559-561 Mr '54. (MLRA 7:3)

1. Meditsinskaya akademiya im. V.Chervenkova, Sofiya, Bolgariya. Predstavleno akademikom V.M.Rodionovym.
(Sodium amide) (Glutaric acids)

SPASOV, Al.; ROBEV, St.

Certain new uses of sodium amide in organic synthesis. Preparation of α-, β-diaryl-β-[N-aryl]-aminopropionic acids. Dokl.AN SSSR 95 no.4:817-819 Ap '54. (MLRA 7:3)

1. Meditsinskaya akademiya im. V.Chervenkova, Sofiya, Bolgariya.
(Propionic acid) (Amides)

SPASOV, A.

SPASOV, A. Some new uses of sodium amide in organic syntheses. III. New variant of the Perkin reaction: obtaining B-aryl-acrylic acids. p. 83 Vol. 3, 1955 IZVESTILA. Sofiia, Bulgaria.

SOURCE: East European Accessions List (EEAL) Vol. 6 No.4 April 1957

SPASOV, A.

SPASOV, A. New method of formation of 9-alkylacridine-N-halogenated alkylates.
p. 281 Vol. 3 1955 IZVESTILA. Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

SPASOV, A.

SPASOV, A.

Obtaining (N-ortho-acyl-benzylidene)-amino-B-trichloroethanol and the acylation of A-(N-ortho-oxybenzylidene)-amino-B-trichloroethanol.

p. 3. (Izvestiia) Vol. 4, 1956. Sofiia, Bulgaria

SO: Monthly Index of East European Accessions (EEAI) LC, - Vol. 7, No. 1, Jan. 1958

G

COUNTRY : BULGARIA
CATEGORY : Organic Chemistry. Synthetic Organic Chemistry

ABS. JOUR. : RZKhim., No. 23 1959, No. 82308

AUTHOR : Spasov, A.; Panayotova, B.
INST. : Sofia University, Physicomathematical Faculty
TITLE : Interaction of β-Lactams and Organomagnesium Compounds

ORIG. PUB. : Godishnik Sofiysk. un-t. Fiz.-matem. fak., 1956-1957 (1958), 51, No 3, 87-101

ABSTRACT : In the boiling (3 hours) of β-lactam of α,β-diphenyl-β-(N-phenyl)-aminopropionic acid with 2 moles of C_6H_5MgBr, a mixture of an alcohol-soluble ketone, $C_6H_5CH(NHC_6H_5)CH(C_6H_5)COC_6H_5$ (I), is formed in ether, m.p. 147° (from alcohol), and a substance insoluble in alcohol, m.p. 177-178° (from isoamyl acetate), identical to a compound previously obtained by condensation of benzylideneaniline and benzylphenylketone (II)

CARD: 1/4

G-19

COUNTRY :
CATEGORY : G

ABS. JOUR. : RZKhim., No. 23 1959, No. 82308

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : with IV in xylol it gives urethane, m.p. 155.5-157° (from aqueous CH_3COOH).-- D. Vitkovskiy
cont'd

CARD: 4/4

G

COUNTRY :
CATEGORY :

PUB. JOUR. : RZKhim., No. 1 1960, No.1258

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT cont'd : (decomp.), and dinitroso derivative, m.p. 136-137° (decomp.; from ether); upon heating up to 200°, I is decomposed into aniline and II; on heating (1.5 hours) with KSCN in aq. alcohol acidified with HCl, a thioureide derivative is obtained, m.p. 193-195°, cyclizing at 220-225°, with splitting off of NH_3, to 1,3,4,5,6-pentaphenylhexahydro-1,3,5-triazinethion-2, m.p. 236-237° (from alcohol-CCl_4). On the basis of

CARD: 2/5

COUNTRY :
CATEGORY :

AUG. JOUR. : RZKhim., No. 1 1960, No. 1258

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT cont'd : is poured into a solution of 0.02 mole of $C_6H_5CH_2COOH$ in 30 ml of C_6H_6 and then heated for 10 min, 0.02 mole of II is added and heated again for 3 hours, water is added and from the organic layer I is separated, m.p. 176-177° (from alcohol). 1 mmole of III, 0.01 mole of $C_6H_5NH_2$ and 22 mmoles of NH_2Na in 30 ml of C_6H_6 are heated for 3 hours, 0.02 mole of II in 10 ml of C_6H_6

CARD: 4/5

G-30

SPASOV, Al., Prof. d-r.; ROBEV, St.

Interrelation of isonicotinic acid & cyancetic acid hydrazides in reference to their tuberculostatic effect. Suvrem. med., Sofia 8 no.12:3-12 1957.

1. Iz Katedrata po meditsinska khimiia pri Med. fakultet na VMI--Sofiia (Zav. katedrata: prof. d-r Al. Spasov) i Katedrata po rentgenologiia i radiologiia pri ISUL (Zav. katedrata: prof. G. Tenchov).

(TUBERCULOSIS, ther.
cyanacetic acid hydrazides, comparison of antituberc. eff. with isoniazid (Bul))
(ACETIC ACID, rel. cpds.
same)
(CYANIDES, eff.
same)

Distr: 4E2c(j)/4E3d

Condensation of bromal with aromatic aldehydes and ammonia. Al. Spasov and Iv. Ivanov. *Bulgar. Akad. Nauk., Izvest. Khim. Inst.* 6, 103–12(1958).—To 0.4 mole aldehyde and 0.4 mole bromal is added 4 ml. 25% aq. NH_3 dropwise and the solid filtered off after 24 hrs. to give RCH:NCH(OH)CBr_3 (I), crystd. from C_6H_6. The following I are prepd. (R, m.p., and % yield given): Ph (II), 125–6°, —; *p*-MeC_6H_4, 129–31°, 44; *o*-$MeOC_6H_4$, 119–20°, —; furyl, 125–6°, —; *o*-HOC_6H_4, 135°, —. II (1.9 g.) in 10 ml. Et_2O with 1 g. AcCl in the presence of 2 g. Na_2CO_3 gives a ppt. which after one hr. is filtered off, and taken up in a little H_2O; it 1st forms an oily layer, then solidifies in a few hrs.; crystd. from 70% EtOH it gives *N*-benzylidene-*N'*-acetylbenzaldiamine, m. 134.5°. The Et_2O filtrate yields on evapn. benzylidenediacetamide, m. 235–7°. Similarly, BzCl gives the benzoyl analogs, m. 149° and 223°, resp.

G. Meguerian

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1-BW(BW)
2-Ja J(NB)Lmop)
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SPASOV, Al.; ZHECHEV, M.

On the preparation of the N-acylated derivatives of the As-substituted dihydrophenarsazines. Godishnik khim 54 no.3:241-252 1959/60 (pub. '61) (RZhKhim 10:9)

(Nitrogen) (Arsenic) (Phenarsazine)
(Acylation)

SPASOV,Al.; GOLOVINSKI,Evg.; MARKOV,K.I.

Antibacterial activity of certain thiomides of picolinic acid.
Izv. mikrob. inst.,Sofia no.11:149-158 '60.
(PYRIDINES pharmacol.)

SPASOV, Al.; POPKHRISTOV, P.; DABEVA, M.

Gelling castor oil and some uses for castor gel. I. Preparation and properties of castor gel. Nauch. tr. vissh. med. inst. Sofia 39 no.1: 251-256. '60.

1. Predstavana ot prof. d-r Al. Spasov, zav. Katedrata po meditsinska khimiia.

(CASTOR OIL)

SPASOV, Al.; ATANASOVA, M.

On hydrazides and some aldehyde hydrazone derivatives of cinchonic and 9-acridinecarboxylic acids. Nauch. tr. vissh. med. inst. Sofia 39 no.1: 267-274 '60.

1. Predstavena ot prof. d-r Al. Spasov, zav. Katedrata po meditsinska khimiia.

(QUINOLINES chem) (ACRIDINES chem)
(HYDRAZINES chem)

SPASOV, Al.; GOLOVINSKI, Evg.; MARKOV, K.

Synthesis of certain aryl-substituted thiomides of picolinic acid in the presence of sulfur and polysulfates and their effect on micro-organisms. Nauch. tr. vissh. med. inst. Sofia 39 no.1:275-284 '60.

1. Predstavena ot prof. d-r Al. Spasov, zav. Katedrata po meditsinska khimiia.

(PYRIDINES pharmacol)

SPASSOV, A. [Spasov, A.]; GOLOWINSKY, E. [Golovinski, E.]

Synthesis of the symmetrical and nonsymmetrical dithioamides of pyridinecarboxylic acids. Doklady BAN 15 no.2:171-174 '62.

1. Lehrstuhl für medizinische Chemie an der Medizinischen Fakultät, Sofia.

GOLOVINSKY, E. [Golovinski, E.]; SPASSOV, A. [Spasov, A.]

Reaction of p-acetylaminobenzaldehyde with amines in the presence of sulfur. Doklady BAN 15 no.5:507-510 '62.

1. Lehrstuhl für medizinische Chemie an der Medizinischen Fakultät, Sofia.

SPASOV, A.; GOLOVINSKIY, Ye.

Synthesis, properties, and antibacterial activity of some picolinamidrazone. Zhur.ob.khim. 32 no.10:3394-3400 O '62. (MIRA 15:11)

1. Vysshiy meditsinskiy institut, Sofiya, Kafedra meditsinskoy khimii.
(Picoline) (Hydrazidine) (Antibiotics)

SPASSOV, A. [Spasov, A.]; GOLOVINSKY, E. [Golovinski, E.]

Synthesis and antibacterial activity of some derivatives of thioanilide picolinic acid. Doklady BAN 16 no.6:645-648 '63.

GOLOVINSKIY, Ye. [Golovinskii, E.]; ARNAUDOV,M.; SPASOV,A.

Synthesis of some N-substituted thioamides of p-nitrobenzoic acid. Doklady BAN 16 no.7:717-720 '63.

1. Vysshiy meditsinskiy institut, Sofiya, Kafedra meditsinskoy khimii.

SPASOV, Al.; PANAYOTOVA, B.; GOLOVINSKIY, Yevg.

Synthesis of aryl-substituted 2-azetidinethiones. Dokl. AN SSSR 158 no.2:429-431 S '64. (MIRA 17:10)

1. Sofiyskiy Vysshiy meditsinskiy institut, Bolgariya. Predstavleno akademikom B.A.Kazanskim.

SPASOV, Al.; PANAYOTOVA, B. [Panaiotova, B.]

Reaction of 1,3,4-triarylated β-lactams with alcohols in the presence of sodium alcoholates. Zhur. org. khim. 1 no.6:1071-1074 Je '65. (MIRA 18:7)

1. Vysshiy meditsinskiy institut, Sofiya, Bolgariya.

SPASOV, Al.; PANAYOTOVA, B. [Panaiotova, B.]

Reduction of 1,3,4-triarylated 2-azetidinones. Zhur. org. khim. 1 no.6:1099-1102 Je '65. (MIRA 18:7)

MOSHKEVICH, I.Ye.; ZAYTSEV, Kh.P.; SPASOV, A.A.

Industrial planning in metallurgical plant forge shops. Kuz.-shtam.proizv. 4 no.2:31-33 F '62. (MIRA 15:2)
(Forge shops--Production control)

MEDVEDEV, I.A.; BEL'GOL'SKIY, B.P.; GLIKMAN, E.S.; SPASOV, A.A.; TOLSTOPYAT, A.A.

Methods of dividing production expenditures into constant and fluctuating ones. Stal' 23 no.8:748-752 Ag '63. (MIRA 16:9)

1. Dnepropetrovskiy metallurgicheskiy institut i Pridneprovskiy sovet narodnogo khozyaystva.

(Metallurgy—Costs)

SPASOV, ALEKSANDUR VEL.

Khimiia i tekhnologiia na gorivata. Sofiya [Narodna prosveta] 1952. 2 v. [The chemistry and technology of fuels. Vol. 1. Solid Fuels; a textbook for the 1st. course in technical schools of industrial chemistry. Vol. 2. "Liquid and gaseous fuels; a textbook for the 2nd course in technical schools of industrial chemistry.]

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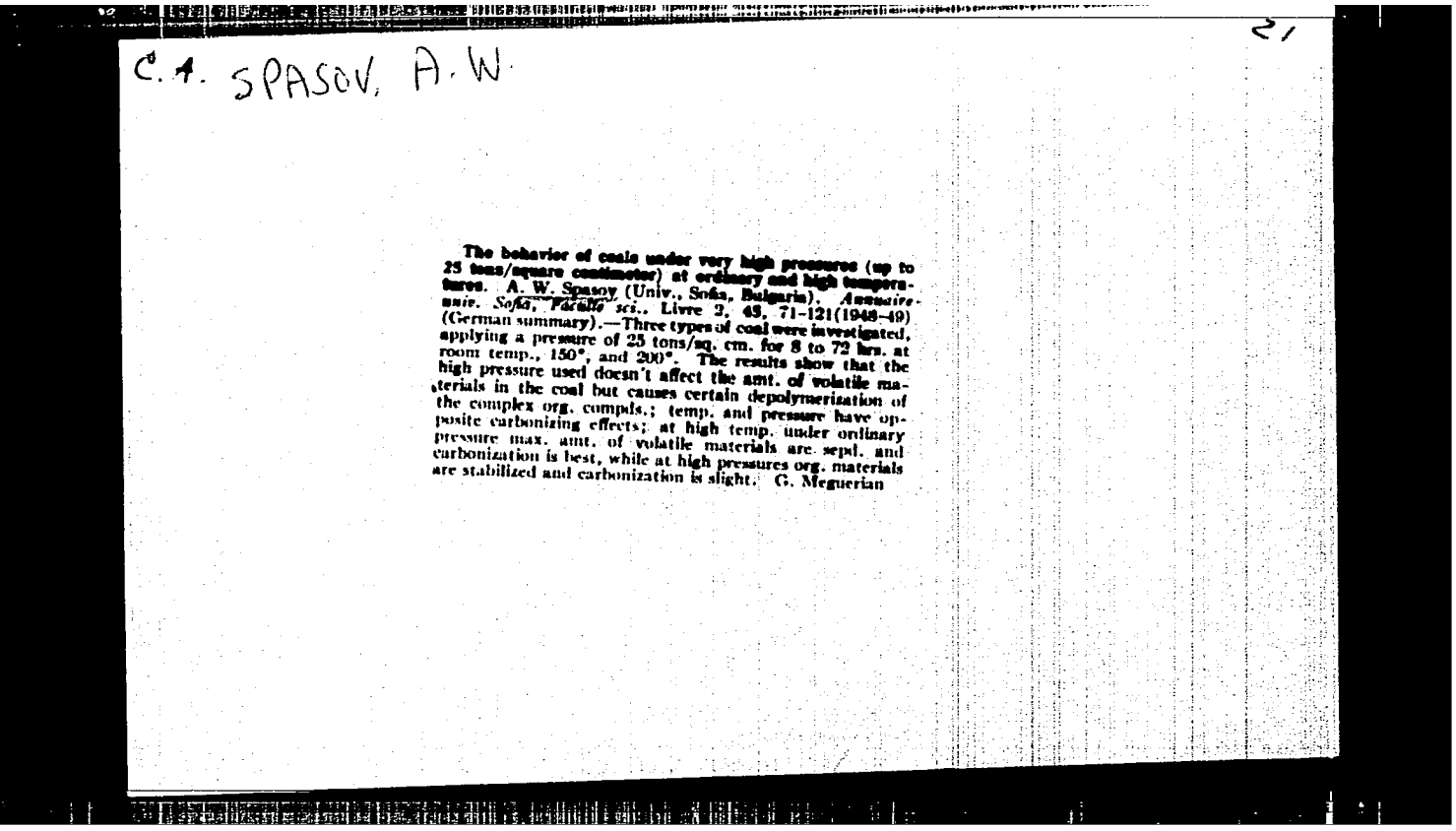
SO: Monthly List of East European Accessions, Vol.3, No.2, Library of Congress, Feb. 1954, Uncl



C.A. SPASOV, A.W.

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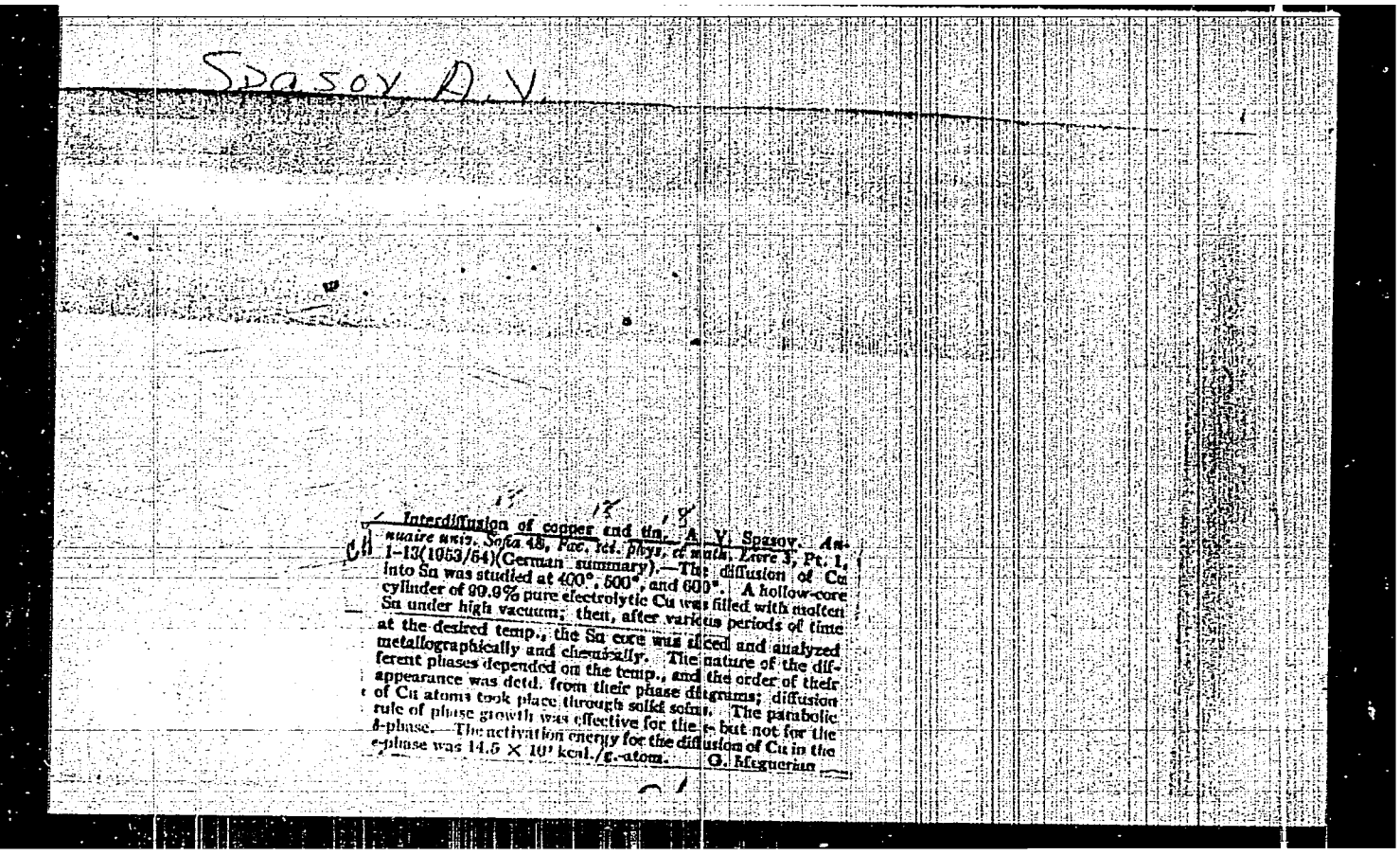
The behavior of coals under very high pressures (up to 25 tons/square centimeter) at ordinary and high temperatures. A. W. Spasov (Univ., Sofia, Bulgaria). *Annuaire univ. Sofia, Faculté sci.*, Livre 2, 45, 71–121(1948–49) (German summary).—Three types of coal were investigated, applying a pressure of 25 tons/sq. cm. for 8 to 72 hrs. at room temp., 150°, and 200°. The results show that the high pressure used doesn't affect the amt. of volatile materials in the coal but causes certain depolymerization of the complex org. compds.; temp. and pressure have opposite carbonizing effects; at high temp. under ordinary pressure max. amt. of volatile materials are sepd. and carbonization is best, while at high pressures org. materials are stabilized and carbonization is slight. G. Meguerian



Spasov A. V.

Interdiffusion of copper and tin. A. V. Spasov. *Annuaire univ. Sofia 48, Fac. sci. phys. et math. Livre 3, Pt. 1*, 1–13(1953/64)(German summary).—The diffusion of Cu into Sn was studied at 400°, 500°, and 600°. A hollow-core cylinder of 99.9% pure electrolytic Cu was filled with molten Sn under high vacuum; then, after various periods of time at the desired temp., the Sn core was sliced and analyzed metallographically and chemically. The nature of the different phases depended on the temp., and the order of their appearance was detd. from their phase diagrams; diffusion of Cu atoms took place through solid soln. The parabolic rule of phase growth was effective for the ε- but not for the δ-phase. The activation energy for the diffusion of Cu in the ε-phase was 14.5×10^3 kcal./g.-atom. G. Kleguerian

SPASOV, A.

Mutual diffusion of copper and tin. Aleksandăr Spasov and Margarita An. Spasova. *Godishnik Sofiĭskiyu Univ., Fiz.-Mat. Fak. Khim.* 50, Pt. 1-2, 16-20(1955/56)(Pub. 1958).—Electrolytic, 99.90% bar Cu, diam. 8 mm., and Sn were combined below 400° to form the following phases: δ, 32.5% Sn, η, 60.5% Sn, and ε, 38% Sn. The growth of the ε phase proceeds according to the parabolic law ($y^2 = 2pt$). From the exponential dependence of the diffusion on temp., the activation energy in the ε phase was detd. (Q = 22,500 cal./g. atom). The corresponding energy above 400° is 14,500 cal./g. atom. This discrepancy is in agreement with Bugakov (*Diffusion in Metals and Alloys* 1949, p. 149 (*C.A.* 47, 4272*h*)) and Seith and Lopmann (*C.A.* 47, 848*b*), who studied the reactive diffusion of other metals. The difference in activation energy under and over 400° is due the change in the nature of the boundary phases.

V. Himelbloom

Distr: 4E2c/4E2b(w)

The effect of very high pressure on the age-hardening of aluminum alloys. Duralumin. V. Al. Smagov, *Gosudarstv. Sotsialisticheskoe Unive.-Fiz., Mat. Fak.* 53, No. 3, 61-72(1958-59) (Pub. 1959)(German summary).—The Brinell hardness of duralumin age-hardened at different temps. and pressures was measured. The compn. of the alloy was: Al 93.99, Cu 3.80, Mg 0.63, Mn 0.36, Si 0.70, and Fe 0.52%. The temp. range was from room temp. to 250°; the pressures applied were 0.0, 2.5, 5.0, 10.0, and 15.0 tons/sq. cm.; the processing time was up to 96 hrs., with measurements made at predetd. intervals. At temps. up to 200°, the hardness of the sample decreased with increasing pressure. At 250° the same effect was observed during the first 4–6 hrs. of aging, but afterwards the hardness increases with increasing pressure. The effect of the duration of aging was irregular, but generally the max. hardness is obtained during the first few hrs. The rate of the age-hardening processes was inversely proportional to the pressures applied, during the first 2 hrs. This effect is caused by the augmented resistance to swelling with aging, owing to the increased pressure.

A. Aladjem

1-MSC(JD)
1-MJC(RJ)
2

36144
S/137/62/000/003/112/191
A060/A101

19.1210 (2402)

AUTHOR: Spasov, A. V.

TITLE: Effect of pressure upon aging of aluminum-copper alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 13, abstract 3I84 ("Godishnik Sofiysk. un-t. Fiz.-matem. fak.", 1959-1960 (1961), 54, no. 3, 55-56, Bulgarian; German summary)

TEXT: Alloys of Al with 5% Cu were investigated. Specimens in the form of cylinders 10 mm diameter and 6 mm high were subjected to hardening in water from a temperature of 520°C. The aging occurred at a pressure of 10 tons/cm^2 and temperatures 150, 200, and 250°C for a period of 1 to 96 hours. It was established that pressure accelerates the process of formation of Guignet-Preston zones, and that in alloys aging under pressure the hardness is greater than in alloys aging under ordinary conditions. The quantity of Cu settled in the form of $CuAl_2$ under aging at 250°C is greater in specimens aging under pressure. The X-ray structure analysis of duralumin specimens aging under pressure has indicated that in that case the pressure inhibits the processes of formation and

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growth of a new phase. It was concluded that pressure can accelerate or inhibit the processes of formation of Guignet-Preston zones depending upon the alloy composition.

V. Srednogorska

[Abstracter's note: Complete translation]

S/137/62/000/008/037/065
A006/A101

AUTHORS: Spasov, Al. V., Dekov, Il. D.

TITLE: The effect of pressure upon the aging of aluminum-zinc alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 8, 1962, 34, abstract 8I210 ("Godishnik Sofiysk. un-t, Fiz.-matem. fak.", 1959 - 1960 (1961), v. 54, no. 3, 75 - 93, Bulgarian; summary in German)

TEXT: The authors studied the effect of 10 t/cm^2 pressure upon aging of an Al-Zn alloy containing 30% Zn. The investigations were made in three directions, namely to determine 1) the effect of pressure upon natural and artificial aging at 100, 150, 200 and 250°C; 2) the effect of pressure upon the formation of zones in artificial aging at 100 and 150°C and zone growth when there is no pressure; 3) the effect of pressure upon the growth of zones obtained without pressure. It was found that in natural aging the hardness changes insignificantly with time; in artificial aging hardness decreases with time. The hardness of specimens, aging under pressure, is below the hardness of specimens aging without pressure. Thus, pressure inhibits the aging process in Al-Zn alloys. [Abstracter's note: Complete translation]

V. Srednogorska

Card 1/1

SPASOV, Al.; PANOV, N.

On the octachlorophenothiazine and its preparation through the interaction of phenothiazine and some of its derivatives with sulfuryl chloride. Godishnik khim 54 no.3:233-240 1959/60 (pub. '61) (EEAI 10:9)

(Chlorophenothiazine) (Sulfuryl chloride)

SPASOV, Al.V.; GEORGIEV, G.D.

Influence of the very high pressure on the aging of aluminum-zinc alloys. Godishnik khim 55 no.3:189-203 '60/61 (publ.'62).

SPASOV, Al.V.; KOSTOV, K.G.

Decarbonization of steel with hydrogen. Godishnik khim 55 no.3:205-219 '60/61 (publ. '62.)

SPASOV, Al., dots.

Metallic alloys and their application. Biol i khim 7 no. 3:7-16 '64.

SPASOV, Angel

Pecuniary estimate of the materials of the individual production in computing the prime cost of production on cooperative farms. Trud tseni 4 no.9:86-95 '62.

SPASOV, B.

Evaluation of underground-water resources in the alluvial deposits of narrow river valleys. Izv Geol inst BAN 9:77-89 '61.

SPASOV, Boris, prof. d-r

Seventy-fifth anniversary of the Sofia University. Nauch zhivot 7 no.2:15-16 Ap-Je '64.

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Osteomyelitis

Intraosseus administration of penicillin in hematogenous osteomyelitis., Sov. Med., No. 1, 1952.

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SPASOV, D.

"Establishment of the Rationalization Fund in Some Commerical Enterprises and the Money Expended on it." p. 6,
(RATSIONALIZATSIIA, Vol. 4, No. 9, Sept. 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

Distr: 4E2c(j)/4E3b/4E3d

Preparation of nitroalcohols and nitroolefins. P. Nikolinski and G. Spasov. *Godishnik Khim.-Tekhnol. Inst.* 3, No. 2, 94–109(1956)(Russian summary 109, German summary 109–10).—Two methods were used to prep. CH_2:C-$(NO_2)CH$:CH_2 (I). To 20 g. Na salt of CH_2:$CHCH_2NO_2$ (II) in 50 ml. MeOH 7 g. paraformaldehyde and 0.1 g. hydroquinone in 20 ml. MeOH was added with stirring, after 2 days at 20° the mixt. neutralized with 5 g. AcOH in 15 ml. Et_2O, the ppt. filtered off, CH_2O and II distd., and the remaining liquid treated with NaOEt in Et_2O to give Na salt of CH_2:$CHCH(NO_2)CH_2OH$ (III); neutralization with dil. H_2SO_4 yielded 16.32 g. III, b. 160–5°, n_D^{19} 1.4330; acetate (IV), n_D^{19} 1.4980. Dehydration of IV by the method of Hass and Vanderbilt (*CA* 34, 1304[1]) gave 50% I, b_{115} 116–18°, n_D^{20} 1.440. To 10 g. NaOMe in 75 ml. Et_2O 20 g. $MeCH(OH)CH_2NO_2$ (V) and 6 g. paraformaldehyde in 20 ml. Et_2O was added dropwise, keeping temp. below 10°. After 2–3 days the semisolid was neutralized with 50% H_2SO_4, extd. with Et_2O, and distd. to remove CH_2O and V and to sep. $MeCH(OH)CH(NO_2)CH_2OH$, $b_{0.1}$ 104–7°, d^{20} 1.2138, n_D^{19} 1.4649; *p*-nitrobenzoate m. 159–60°; diacetate (VI) b_{12} 197–8°, d^{20} 1.2180, n_D^{19} 1.4485. Dehydration of VI over Na_2CO_3 or phthalic anhydride and P_2O_5 gave AcO-$CH_2C(NO_2)$:$CHMe$, b. 179–81°, n_D^{19} 1.4390.

G. H. Meguerian

S/081/62/000/024/001/052
B108/B186

AUTHORS: Gerasimov, Mikhail, Petrova, Yelisaveta, Dobrevski, Ivan, Spasov, Grozdan, V"lchev, Dimit"r

TITLE: Bulgarian oil: composition with regard to structural groups, and properties

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 714, abstract 24M129 (Nauchni tr. Vissh. in-t mekhaniz. i elektrif. selskoto stop.-Ruse, v. 4, 1961 (1962), 185 - 197 [Bulg.; summaries in Russ. and Eng.])

TEXT: The methods of Van Nes - Van Westen, Cornelissen - Waterman, Kurz - Ward, Robert, Umstätter, Gilyazetdinov, and Dinsley - Karlov were used to determine the composition with regard to structural groups of the 5-% fractions of Tyuleniy island crude oil, which is a typical heavy oil. It was found that none of the above methods is superior to the others. It is shown that the Tyuleniy island crude oil is rich in high-molecular paraffin hydrocarbons. [Abstracter's note: Complete translation.]

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S/081/62/000/024/003/052
B108/B186

AUTHORS: Drenchev, Nedelcho, Spasov, Grozdan, Lyubenov, Slavi

TITLE: The performance of gas oils manufactured from Tyuleniy crude oil

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 714, abstract 24M131 (Nauchni tr. Vissh. in-t mekhaniz. i elektrif. selskoto stop.-Ruse, v. 4, 1961 (1962), 199 - 209 [Bulg.; summaries in Russ. and Ger.])

TEXT: The kerosene - gas oil fraction of Tyuleniy crude oil (FTO) has a low cetane rating (CR) (~35 - 38). Every 10% of high-cetane Rumanian gas oil added to the FTO increases its CR by ~2 units. The concentration of butyl nitrate required to increase the CR to 42 - 46 is 0.5 - 1%. FTO produced by vacuum distillation has a slight tendency to formation of scale and lacquer. The turbidity temperature of the FTO is $<-70^{\circ}C$. A mixture of FTO with 25% (of the mixture) of high-octane Rumanian paraffin-based aircraft gas oil has a better CR and a satisfactory turbidity temperature (-5 to $-8^{\circ}C$). [Abstracter's note: Complete translation.]

Card 1/1

DRENCHEV, N.; SPASOV, Gr.; LIUBENOV, Sl.

Some of the more important operational qualities of the gas oil of the Tyulenovo petroleum. Khim i industriia 34 no.1:4-6 '62.

KAISHEV, Krum, dots.; SPASOV, Grozdan; LIUBENOV, Slavi; VULCHEV, Dimitur, inzh.

Possibilities of obtaining winter diesel fuel from the Dubnik petroleum. Tekhnika Bulg 12 no.4:5-7 '63.

VULCHEV, D.; SPASOV, G.

Structural group analysis of the Tyulenovo petroleum with the aid of some characteristics of viscosity and temperature. Khim i industriia 35 no.6:203-205 '63.

SPASOV, G.F.

We use machines efficiently. Zashch. rast. ot vred. i bol. 7 no.10:11-12 O '62. (MIRA 16:6)

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SPASOV, KH.

"Geology in the Soviet Union during Stalin's Time," p. 1.
(Priroda I Znanie, Vol.6, No.5, May 1953, Sofiya.)

SO: East European Vol.2, No.9
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Stefanov, Atl.

"Atanas Stefanov, A Renowned Bulgarian Geologist, 1894-1953, p. 22" (PRIRODA I ZNANIE) Vol. 6, No. 6, June 1953, Sofiya, Bulgaria

SO: Monthly List of East European Accessions L.C., Vol. 2, No. 11, Nov. 1953, Uncl.

SPASOV, Kh.

"The Largest Animal On Earth, p. 23" (PRIRODA I ZNANIE) Vol. 6, No. 6, June 1953
Sofiya, Bulgaria

SO: Monthly List of East European Accessions L.C., Vol. 2, No. 11, Nov. 1953, Uncl.

SPASOV, KH.

Contribution to the stratigraphy of the Jura near Strazha village, Turgovishte, Okoliya.

p. 115 (Bulgarska akademiia na naukite. Geologicheski institut. Izvestiia, Vol. 3, 1955, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 2, February 1958

SPASOV, KH.

Bibliographic index of Bulgarian Upper Silurian graptolites.

p. 163 (Bulgarska akademiia na naukite. Geologicheski institut. Izvestiia, Vol. 3, 1955, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 2, February 1958

SPASOV, Kh.

Geology of the region between the Struma and Dzherman rivers and the Kyustendil and Stanke Dimitrovo highways. p. 37. (IZVESTIIA, Vol. 4, 1956, Sofia, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sep 1957. Uncl.

SPASOV, Kh.

Contribution to the study of Cyrtograptus (Carruthers) Lapworth in the gotland of Bulgaria. p. 131. (IZVESTIIA, Vol. 4, 1956, Sofia, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sep 1957. Uncl.

SPASOV, KH.

"Some little known graptolites from Gotland in Bulgaria."

p. 113 (Izvestiia, Vol. 5, 1957, Sofiia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, V ol. 7, No.8, August 1958

SPASOV, KH.

"Contribution to the lithology and the paleogeography of the Sarmatian stage in northeast Bulgaria."

p. 129 (Izvestiia, Vol. 5, 1957, Sofiia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

SPASOV, Kh.

New deposits of the Silurian period in Southwestern Bulgaria. p. 215

Bulgarska akademiia na naukite. Geologicheski institut. IZVESTIIA. Sofia, Bulgaria., Vol. 7, 1959.

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Uncl.