

COUNTRY : Poland
CATEGORY :
6-2
ABST. JOUR. : REKhim., No. 11 1959, No. 7422
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : of the B; the AS of V is obtained in 80% yield,
at 165-167°. Application of a similar procedure
yields the SA of VII, yield 70%, mp 164-165°.
V. Skorodumov
CARD: 10/10

SZCZUCKI, E.; OKON, K.

On picrylamides of aromatic sulfonic acids. *Bul Ac Pol chim* 7
no.2:63-65 '59. (EAI 9:7)

1. Military Technical College, Warsaw. Presented by T.Urbanski.
(Picryl group) (Amides) (Aromatic compounds)
(Sulfonic acids)

SZCZUCKI, E.; OKON, K.

On the reaction of sulfanilide nitration. *Bul Ac Pol chim* 7 no.2:
67-70 '59. (Sulfanilide) (Nitration) (EAI 9:7)

SZCZUCKI, E.; OKON, K.

On the reaction of oxidation of sulfanilides. *Bul Ac Pol chim*
7 no.2:71-74 '59. (EAI 9:7)
(Sulfanilide)

COUNTRY : Poland

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001237910017-0"

ABS. JOUR. : *Acta Chem. Pol.*, 1959, 7, 71-74

AUTHOR : Szczucki, E.; Okon, K.

INST. : Polish Academy of Sciences

TITLE : On the reaction of oxidation of sulfanilides.
Sulfanilide

ORIG. PUB. : *Acta Chem. Pol.*, 1959, 7, 71-74

ABSTRACT : The reaction of oxidation of sulfanilides (C₆H₄NH₂SO₂CH₃) and related compounds is investigated. It is shown that the reaction proceeds via a radical intermediate (disulfide) and that the reaction is first order with respect to the sulfanilide. The reaction is inhibited by the presence of oxygen and is accelerated by the presence of copper(II) ions. The reaction is also accelerated by the presence of sodium hydroxide. The reaction is inhibited by the presence of sodium acetate. The reaction is also inhibited by the presence of sodium chloride. The reaction is also inhibited by the presence of sodium sulfate. The reaction is also inhibited by the presence of sodium nitrate. The reaction is also inhibited by the presence of sodium phosphate. The reaction is also inhibited by the presence of sodium bicarbonate. The reaction is also inhibited by the presence of sodium carbonate. The reaction is also inhibited by the presence of sodium hydroxide. The reaction is also inhibited by the presence of sodium acetate. The reaction is also inhibited by the presence of sodium chloride. The reaction is also inhibited by the presence of sodium sulfate. The reaction is also inhibited by the presence of sodium nitrate. The reaction is also inhibited by the presence of sodium phosphate. The reaction is also inhibited by the presence of sodium bicarbonate. The reaction is also inhibited by the presence of sodium carbonate. The reaction is also inhibited by the presence of sodium hydroxide.

CARD:

MAJDA, H.; OKON, K.

Attempts at preparation of unsymmetrical benzene-1,2,4-trisulfonic acid. *Bul Ac Pol chim* 7 no.2:79-81 '59. (EEAI 9:7)

1. Military Technical College, Warsaw. Presented by T.Urbanski.
(Benzenesulfonic acid)

OKON, K.; ALUCHNA, G.

Chlorides of the acid form of nitroparaffins. Bul Ac Pol chim 7
no.2:83-86 '59. (KEAI 9:7)

1. Military Technical College, Warsaw. Presented by T.Urbanski.
(Chlorides) (Paraffins) (Acids)

OKON 15

Extr: LEBa

Hydrolysis of aromatic sulfones during nitration with nitric acid & 1:4-1:5 or with mixed acid. Kasimierski, Chem. Abstr. Hydrolysis, Acad. Tech. Ser. ~~Arachidonic Acid~~ ~~Proc. Chem. 5, 18-19 (1950) (Engl. summary)~~ - Bis(4-aminophenyl) and bis(p-hydroxyphenyl) sulfones (0.6 mole) yielded on 6-hr. mixed-acid nitrations at 120-80 and 70-100°, resp., 80% picric acid and 40% bis(2,4-dinitrophenyl)sulfone in 25-3°; the latter hydrolyzed partly to 40% picric acid. Bis(p-aminophenyl) sulfone (7.0 mole) in 312-13° in 20 cc. concd. H₂SO₄ at 110° treated with 20 cc. HNO₃ (d = 1.42), the mixt. heated 8 hrs. at 90-110°, cooled, and poured into cold water and the ppt. dried from acetone yielded 85% hexanitrodibenzosulfone (m. 243-6°). On mixed-acid nitration the rupture of the C-S bond also took place.

See also
1

CA

Distr: 4E2c

✓ Structures of nitrogen pentoxide and nitric acid. Kar-
 mierz Okoń and Kazimiera Wańkowska. Biol. Wzrostu
~~Acad. Tech. im. J. Dąbrowskiego (Warsaw) 8, No. 48,~~
~~46-54 (1939) (English and Russian summaries).—The fre-~~
 quencies in cm^{-1} detd. from Raman spectra were: HNO_2 ,
 (I) m. -41° , b. 86° : 610, 680, 925, (1050), 1300,
 (1360), 1535, and 1670; N_2O_5 -I (20:80 vol./vol.) soln.:
 610, 680, 930, (1050), 1295-1300, (1360), 1400, 1540, and
 1680; EtNO_2 (II) m. -60° , b. 114° : 295, 490, 635, 870,
 960, 1035, 1100, 1175, 1220, 1260, 1365, 1400, 1495, and
 1560; EtONO_2 (III) m. -102° , b. 87° : 390, 370, 860,
 (1020), (1115), 1160, 1215, 1275, (1360), (1445), (1510),
 and 1635. I in org. solvents, N_2O_5 in CCl_4 , POCl_3 , or II,
 and aliphatic esters of I did not have a frequency of 1400
 cm^{-1} . Mol. wts. of I, II, and III (method of Ramsay and
 Shields) were about 248, 135, and 93, resp.; of I in the vapor
 state (the V. Meyer method), 225. Viscosities of II and III
 were 0.72 and 0.57 cp. at 18° . Azine structures and their
 isomerism are suggested for I and N_2O_5 . A. Szafraniecki

4
 1-njc(50)
 1

JK
 11

Distr: 4E3d

✓ Some properties of methylchloroamine. Kazimierz Okoń, Tadeusz Grabowski. *Bul. Wojskowej Akad. Tech. im. T. Dąbrowskiego* (Warsaw) 8, No. 75-8 (1959) (English and Russian summaries).— CH_3NCl_2 (I) (2 g.) exploded violently on addn. of 1.6 g. Na_2S . Distd. over CaOCl_2 , I exploded in one case. A review covering prepn. and physicochem. properties of I. 15 references. A. Szafranski

4
IBM(BW)
1 JAJ(JK)
1

CYDN, K.

Preparation of picryl chloride and bromide from pyridine picrate. p.15.

ROZNIKI CHEMII. Warszawa, Poland. Vol. 33, no. 1, 1959.

Monthly List of East European Accessions (MEMI), DC. Vol. 8, No. 9, September 1959
Uncl.

OKON, K.; HERMANOWICZ, F.

Picryl xantogenate and rhodanate. Bul chim PAN 8 no.2:37-39 '60.
(KEAI 10:9/10)

1. Military Technical College, Warsaw. Presented by T. Urbanski.

(Picryl group) (Xanthones) (Thiocyanates)

SZCZUCKI, Eugeniusz; OKON, Kazimierz

On the reactions of sulfanilide nitration. Roczniki chemii 34 no.1:
159-164 '60. (KRAI 10:9)

1. Technical Military College, Warsaw.

(Nitration) (Sulfanilide)

OKON, Kazimierz; HERMANOWICZ, Franciszek

On the reaction of picrylpyridinium chloride with sulfites in aqueous solutions. Roczniki chemii 34 no.5:1275-1278 '60.

(KRI 10:9)

1. Military Technical College, Warszawa.

(Picrylpyridinium chloride) (Sulfites)
(Water) (Solutions)

OKON, Kazimierz

New methods of preparing nitrogen pentoxide. Roczniki chemii 34, no. 5:
1279-1280 '60. (KAI 10:9)

1. Military Technical College, Warszawa.

(Nitrogen oxides)

OKON, Kazimierz

New method of preparing hexanitrobiphenyl disulfide. Roczniki chemii
34 no.5:1281-1282 '60. (KEAI 10:9)

1. Military Technical College, Warszawa.

(Phenyl group) (Sulfides) (Nitro group)

OKON, Kasimierz; ALUCHNA, Grzegorz; LUKIANIUK, Jerzy

On some polynitro aryl ethers. Roczniki chemii 34 no. 5:1455-1459 '60.
(EEAI 10:9)

1. Military Technical College, Warszawa.

(Ethers) (Nitro group)

MAJDA, H.; OKON, K.

Attempts of preparation of benzene-1,2,4-trisulfonic acid. II. Bul
chim PAN 9 no.4:183-194 '61.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

(Sulfonic acid) (Benzene)

MAJDA, R.; OKON, K.

Chemical properties of arylsulphonylammonium salts. I. Solvation of arylsulphonyl cations $[ArSO_2^+]$ using pyridine bases. Bul chim PAN 9 no.4:195-199 '61.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

(Aryl group)	(Sulfonyl group)	(Ammonium)	(Salts)
(Cations)	(Pyridine)		

MAJDA, H.; OKON, K.

On the reaction of the sodium salt of 2,2',4,4'-tetrasulphodiphenyl-
disulphide with PCl_5 . *Bul chim PAN* 9 no.4:201-206 '61.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

(Sodium salt) (Sulfinyl) (Sulfides)
(Phosphorchloride)

STACHLEWSKA-WROBLOWA, A.; OKON, K.

Investigations on the properties of the tert.-phosphine oxides. I. On some properties of triphenylphosphine oxide (TPPO). II. Reactions of electrophilic substitution in triphenylphosphine oxide (TPPO) and its derivatives. III. On chemical properties of derivatives of triphenylphosphine oxide (TPPO) with various functional groups in the aromatic rings. *Bul chim PAN* 9 no.5:281-301 '61,

1. Military Technical College, Warsaw. Presented by T. Urbanski.

(Phosphine) (Oxides) (Phenyl group) (Chemical reactions)

OKON, Kazimierz; HERMANOWICZ, Franciszek

Picryl xanthate and rhodanate. Roczniki chemii 35 no.5:1237-1242 '61.

1. Military Technical College, Warsaw.

S/O81/62/000/022/018/088
B144/B101

AUTHORS: Majda, Henryka, Okoń, Kazimierz

TITLE: Reaction of the sodium salt of 2,2',4,4'-tetra-sulfodiphenyl disulfide with PCl_5

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 185, abstract 22Zh120 (Rocz. chem., v. 35, no. 6, 1961, 1741-1746 [Pol.; summary in Eng.])

TEXT: $[2,4-(\text{NaO}_2\text{S})_2\text{C}_6\text{H}_3\text{S}]_2$ (I) was obtained as intermediary product in attempts to synthesize $1,2,4-(\text{HO}_2\text{S})_3\text{C}_6\text{H}_3$. Reaction of I with PCl_5 yields $1,3,5-(\text{ClO}_2\text{S})_3\text{C}_6\text{H}_3$ (II) owing to autooxidation and regrouping. The diazo solution of 0.1 mole $2,4-(\text{NaO}_2\text{S})_2\text{C}_6\text{H}_3\text{NH}_2$ in 100 ml water is added to 0.1 mole KSCSO_2H_5 at 60°C , kept for 30 min at $60-80^\circ\text{C}$, evaporated to dryness, and 70% I, $\text{C}_{12}\text{H}_6\text{Na}_4\text{O}_{12}\text{S}_6$, is obtained (from alcohol). 0.05 mole I is ground with 0.8 mole PCl_5 , stirred for 8 hrs at 140°C , the POCl_3 formed

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Reaction of the sodium salt ...

S/OB1/62/000/022/018/088
B144/B101

is drawn off, when cooled the mixture is poured into ice-water, and 60% II, $C_6H_3Cl_3O_6S_3$, m.p. $186^{\circ}C$, is obtained. The IR and UV spectra of I, II, and $C_6H_3(SO_3Na)_3-1,3,5$ are indicated. [Abstracter's note: Complete translation.]

Card 2/2

S/OB1/62/000/022/017/088
B144/B101

AUTHORS: Majda, Henryka, Okoń, Kazimierz

TITLE: Benzene-1,2,4-trisulfonic acid

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 185, abstract
22Zh119 (Roczn. chem., v. 35, no. 6, 1961, 1747-1753 [Pol.;
summary in Eng.])

TEXT: 1,2,4-(NaO₃S)₃C₆H₃ (I) is obtained by 3 methods: (a) diazo solution (solution A) from 2,4-(NaO₃S)₂C₆H₃NH₂ (II) is converted by KSCSO₂H₅ (III) successively to 2,4-(NaO₃S)₂C₆H₃SCSO₂H₅, 2,4-(NaO₃S)₂C₆H₃SH, and [2,4-(NaO₃S)₂C₆H₃S]₂ which is oxidized by KMnO₄ to I; (b) when SO₂ reacts with solution A, 2,4-(NaO₃S)₂C₆H₃SO₂Cl is obtained, which is converted to I; (c) 2,4-(NaO₃S)₂C₆H₃Cl (IV) is converted to I by boiling with Na₂SO₃ in water in the presence of CuSO₄. Regrouping of I into 1,3,5-(ClSO₂)₃C₆H₃ (V) is effected by heating with PCl₅. 0.1 mole II is diazotized in HCl

Card 1/3

Benzene-1,2,4-trisulfonic acid

S/C81/62/000/022/017/C85
B144/B101

medium at 0.5°C , 0.1 mole III in 160 ml water of 60°C is added to the solution, heated ($60-80^{\circ}\text{C}$) for 30 min, and evaporated to dryness; the residue is dissolved in 250 ml water, at $50-60^{\circ}\text{C}$ oxydized with a saturated solution of 22 g KMnO_4 (the last portion of the solution is added at $\sim 100^{\circ}\text{C}$), and stabilized with alcohol; BaCl_2 is added to the hot filtrate saturated the BaSO_4 precipitate is discarded, saturated Na_2CO_3 is added to the filtrate; the filtrate is evaporated, and 68% I, $\text{C}_6\text{H}_3\text{Na}_3\text{O}_9\text{S}_3$, is obtained. Solution A from 0.1 mole II is added by pouring to 120 ml solution of SO_2 in glacial CH_3COOH with addition of 2 g CuCl_2 , 40 ml concentrated HCl is added, kept for 4.5 hrs at $\sim 40^{\circ}\text{C}$, and evaporated in vacuo at 40°C , when the evolution of N_2 has ceased; the residue is dissolved in saturated Na_2CO_3 , and by addition of alcohol 62% I is precipitated. 0.1 mole IV, 0.1 mole Na_2SO_3 , 0.5 g CuSO_4 , and 100 ml water are boiled for 10 hrs, drawn off hot, and evaporated; the residue is recrystallized from alcohol, and 60% I is obtained. 0.1 mole I is ground with 0.45 mole PCl_5 , kept for

Card 2/3

Benzene-1,2,4-trisulfonic acid

S/OB1/62/000/022/017/088
B144/B101

8 hrs at 140°C, the cooled melt is poured into ice-water, and 62% V, $C_6H_3Cl_3O_6S_3$, is separated, m.p. 186°C (from glacial CH_3COOH). The IR and UV spectra of I and 1,3,5- $(NaO_3S)_3C_6H_3$ are shown. [Abstracter's note: Complete translation.]

Card 3/3

GROCHOWSKI, J.W.; OKON, K.

Reactions of aromatic amines with pyridinium salts. Pt.1. *Biał
chim PAN* 10 no.10;321-325 '62.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

GROCHOWSKI, J.W.; OKON, K.

2,4-di- and trinitrophenyl-~~O~~-picolinium-, 2,6-lutidinium and
-quinolinium halogenides. Biul chim PAN 10 no.10:527-528 '62.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

MAJDA-GRABOWSKA, H.; OKON, K.

Benzenedisulfonic acids. Biul chin PAN 10 no.10:529-531 '62.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

MAJDA-GRABOWSKA, H.; OKON, K.

Chemical properties of arylsulfonylammonium salts. Pt.2. Biul
chim PAN 10 no.10:533-536 '62.

1. Military Technical College, Warsaw. Presented by T. Urbanski.

S/081/62/000/021/024/069
B141/B101AUTHORS: Majda, Henryka, Okon, KazimieraTITLE: Chemical properties of aryl-sulfonyl ammonium salts. I.
Solvation of aryl-sulfonyl cations $(ArSO_2^+)$ with pyridine basesPERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 174-175,
abstract 21Zh169 (Roczn. chem. v. 36, no. 1, 1962, 141-148
[Pol.; summary in Eng.]

TEXT: When $ArSO_2Cl$ [Ia-f, where (a) $Ar = C_6H_5$, (b) $Ar = o-CH_3C_6H_4$,
(c) $Ar = p-CH_3C_6H_4$, (d) $Ar = m-ClSO_2C_6H_4$, (e) $Ar = p-ClSO_2C_6H_4$,
(f) $Ar = 3,5-(ClSO_2)_2C_6H_3$] is brought into reaction with pyridine, the
resulting products are γ -picoline, and isoquinoline, (IIa, c-f), (IIIa-f),
and (IVa, c-f). It was shown that the stability of the substances obtained
can be noted in the following order: isoquinoline > pyridine > γ -picoline;
under analogous conditions α - and β -picoline do not react. When IIa
reacts with $C_6H_5SO_3Na$, the benzene sulfonate of phenyl-sulfonyl

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S/081/62/000/021/024/069
B141/B101

Chemical properties of aryl- ...

pyridinium (V) is obtained. When phenol is brought into reaction with Ila, IIIa, or IVa, $C_6H_5SO_2OC_6H_5$ (VI) forms. 1 ml pyridine is added dropwise to 0.01 mole Ia dissolved in 30 ml C_6H_6 , the mixture is kept for 1 hr at 30-40°C, and Ila, $C_{11}H_{10}ClNO_2S$, is obtained, yield 78.2%, m.p. 88-91°C (from benzene). Likewise 0.5-2 hrs heating of Ia-f with bases yields (substance, gross formula, yield in %, m.p. in °C): Ila, $C_{12}H_{12}ClNO_2S$, 76, 93-95; d, $C_{11}H_9Cl_2NO_4S_2$, 74.6, 157-160; e, $C_{11}H_9Cl_2NO_4S_2$, 71, 93-5; f, $C_{11}H_8Cl_3NO_6S_3$, 68.4, 168-170; IIIa, $C_{12}H_{12}ClNO_2S$, 63, 106-108; b, $C_{12}H_{14}ClNO_2S$, 76.3, 106-108; c, $C_{12}H_{14}ClNO_2S$, 58.3, 63-65; d, $C_{12}H_{11}Cl_2NO_4S_2$, 60, 96-98; e, $C_{12}H_{11}Cl_2NO_4S_2$, 55, 62-5; f, $C_{12}H_{10}Cl_3NO_6S_3$, 52, 161-164; IVa, $C_{15}H_{12}ClNO_2S$, 84, 110-114; a, $C_{16}H_{14}ClNO_2S$, 78.5, 148-151; d, $C_{15}H_{11}Cl_2NO_4S_2$, 70, 218-220; e, $C_{15}H_{11}Cl_2NO_4S_2$, 82, 148-152; f, $C_{15}H_{10}Cl_3NO_6S_3$, 85, 190-195. The mixture of 0.01 mole Ila, 30 ml C_6H_6 ,

Card 2/3

MAJDA-GRABOŚKA, Henryka; OKOŃ, Kazimierz (Warszawa)

Benzenedisulfonic acids. Roczniki chemii 37 no.4:367-370 '63.

MAJDA-GRABOWSKA, Henryka; OKON, Kazimierz (Warszawa)

Derivatives of benzene-1,3,5-trisulfonic acid. Pt. 1. Roczniki chemii 37 no.4:371-377 '63.

MAJDA-GRABOWSKA, Henryka; OKON, Kazimierz (Warszawa)

Chemical properties of arylsulfonammonium salts. Pt. 2. Roczniki chemii 37 no.4:379-384 '63.

GROCHOWSKI, Jerzy Wojciech; OKON, Kazimierz

Reactions of aromatic amines with ammonium compounds of pyridinium bases. Pt.1. Roczniki chemii 37 no.11:1429-1436 '63.

Ammonium halogenides of α - picoline, 2,6-litidine and quinoline substituted by 2,4-di- and 3,4,6-trinitrophenyl: Ibid.:1437-1441.

1. Military Technical College, Warsaw.

L 41816-66 EHP(j)/T WJ/JA, JWD/RM

ACC NR: AP6031691

(N)

SOURCE CODE: PO/0099/66/040/003/0391/0404

AUTHOR: Mrzewinski, Tadeusz; Okon, KazimierzORG: Military Technical College, Warsaw (Wojskowa Akademia Techniczna)TITLE: Studies on substances inhibiting nitrocellulose decomposition

SOURCE: Roczniki chemii-annales societatis chimicae polonorum, v. 40, no. 3, 1966, 391-404

TOPIC TAGS: chemical decomposition, nitrocellulose, polarographic analysis, spectrophotometric analysis, aromatic hydrocarbon

ABSTRACT: Comparative studies were performed on the thermal decomposition of nitrocellulose with the use of some arylamines, phenols, aromatic hydrocarbons, and their nitro derivatives as inhibitors. The polarographic and spectrophotometric in UV methods were jointly applied for qualitative and quantitative determination of nitroso and nitro derivatives of the substances used. Orig. art. has: 7 figures and 5 tables. [Based on authors' Eng. abst.] [JPRS: 36,002]

SUB CODE: 07 / SUEM DATE: 15Jun65 / SOV REF: 001 / OTH REF: 009

Card 1/1 af

0919 0291

L 41771-66 EWP(j)/T IWP(e) RM

ACC NR: AP6031701

(N)

SOURCE CODE: PO/0099/66/040/003/0475/0486

AUTHOR: Dabrowski, Roman; Okon, Kazimierz

26

ORG: Military Technical College, Warsaw (Wojskowa Akademia Techniczna)

B

TITLE: Preparation and investigation of semiconductor products of polycondensation of hydroquinone and its dimethyl ether and some polycarboxylic acids anhydrides

15

SOURCE: Roczniki chemii-annuals societatis chimicae polonorum, v. 40, no. 3, 1966, 475-486

TOPIC TAGS: polycondensation, hydroquinone, carboxylic acid anhydride

ABSTRACT: Eighteen products of polycondensation of hydroquinone and of its dimethyl ether with some polycarboxylic acids anhydrides were prepared, unknown to the literature, and their electric, magnetic and chemical properties were comparatively studied. Orig. art. has: 3 figures, 1 formula and 3 tables. [Based on authors' Eng. abst.] [JPRS: 36,002]

SUB CODE: 07 / SUBM DATE: 02Jul65 / SOV REF: 003 / OTH REF: 003

Card 1/1 *S*

0379 0381

L 00917-67 EWP(j) WW/JW/RM

ACC NR: AF6035461

(N)

SOURCE CODE: PO/0099/66/040/004/0631/0636

25
B

Bednarczyk, Mieczyslaw and Okon, Kazimierz of the Military Technical College
(Wojkowa Akademia Techniczna) Warsaw.

"Nitration of Benzene, Naphthalene and Phenol with Silver and Potassium Nitrates in the Presence of Some Inorganic and Organic Acid Chlorides"

Warsaw, Roczniki Chemii, Vol 40, No 4, 1966, pp 631-636.

Abstract (Authors' English abstract): Benzene, naphthalene, and phenol were acted upon with $AgNO_3$ and KNO_3 in the presence of $SiCl_4$, $SnCl_4$, PCl_5 , $AsCl_3$, $SbCl_3$, $SbCl_5$, SO_2Cl_2 , $SOCl_2$, $C_6H_5SO_2Cl$, ICl , CH_3COCl and C_6H_5COCl . It was found that the chlorides used catalyze the process of nitration with silver and potassium nitrates. Orig. art. has: 2 tables. [JPRS: 36,862]

TOPIC TAGS: nitration, benzene, naphthalene, phenol

SUB CODE: 07 / SUBM DATE: 02 Jul 65 / ORIG REF: 004 / OTH REF: 007
SOV REF: 002

Card 1/1 *llh*

1837 3179

OKON, L.B.

55-4-41/52

AUTHOR: KOBZAREV, I. Yu., OKON', L.B.
TITLE: On the Common Production of Λ^0 - and Θ^0 -Particles.
 (O sovmeštneĭ proizvodeni Λ^0 - i Θ^0 -chastits. Russian).
PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 4, pp 933 - 934
 (U.S.S.R.)

ABSTRACT: Analysis of the angular - and energy distributions of pions on the occasion of the decay $\tau^+ \rightarrow 2\pi^+ + \pi^-$ leads to the conclusion that spin- and parity of the τ -meson are equal to 0^- . The meson, in this case, cannot decay into two pions, so therefore two K^+ -mesons must exist: τ^+ and Θ^+ . Masses and life of the K^+ -mesons agree with one another. This equality of the masses can be explained by the hypothesis by LEE and YANG. Besides, the following hypothesis is also possible: The decay-interactions of the K -mesons do not keep their parity and only a K -meson exists.

Experiments on the pair-like creation of Λ^0 , K^0 -particles may be suited for the clarification of the problem of the number of mesons. J. STEINBERGER, et al. Phys. Rev., 103, 1827 (1956) observed acts of the decay of the type: $\Lambda^0 \rightarrow p + \pi^-$, $\Theta^0 \rightarrow \pi^+ + \pi^-$. The particles Λ^0 and Θ^0 are created in the course of the process $\pi^- + p \rightarrow \Lambda^0 + \Theta^0$. These acts of decay have a life of $\tau \sim 10^{-10}$ sec.

The authors next discuss the case in which one (single) K -meson

Card 1/2

L 01076-67 ENT(1)

ACC NR: AP6028207

SOURCE CODE: UR/0367/66/003/006/1154/1160

AUTHOR: Kobzarev, I. Yu. ; Okun', L. B. ; Pomeranchuk, I. Ya.

ORG: Institute of Theoretical and Experimental Physics of GKIAE (Institut Teoreticheskoy i Eksperimental'noy Fiziki GKIAE)

TITLE: The possibility of experimental detection of mirror particles

SOURCE: Yadernaya fizika, v. 3, no. 6, 1966, 1154-1160

TOPIC TAGS: mirror particles, particle interaction, electromagnetic interaction, decay, neutrino, gravitation

ABSTRACT: The possible existence of "mirror" particles (R) in the solar system in addition to the usual particles (L) is considered in connection with the observed violation of CP-invariance in the $\kappa^0 \rightarrow 2\pi$ decay. Their introduction restores the left-right equivalency. It is shown that mirror particles cannot interact with usual particles strongly, semi-strongly or electromagnetically. Weak interactions between L and R particles, due to the exchange of neutrinos, are possible. The L and R particles must have a common gravitational interaction. The question of the existence of macroscopical bodies (stars) consisting of R-matter and their possible

Card 1/2

L 01075-67

ACC NR: AP6028207

observation is discussed. The authors thank V. N. Gribov, V. I. Kogan, S. B. Pikell'ner, B. M. Pontekorvo, D. A. Frank-Kamenetskiy and I. S. Shapiro for interesting discussions. Orig. art. has: 7 formulas and 2 figures. [Authors' abstract]

[AM]

SUB CODE: 20/ SUBM DATE: 29Dec65/ ORIG REF: 004/ OTH REF: 017/

Card 2/2 vlr

OKOCH, N.

COUNTRY : Poland
CATEGORY : H-6
ABR. JOUR. : HZKhim., No. 13, 1959, No. 57571
AUTHOR : Izwiakowski, S., Czomiskov, A., Polio, I., and *
INST. : Not given
TITLE : The Explosive Properties of AN-Lime Meal Mixtures
ORIG. PUB. : Przemysl Chem, 13, No 12, 697-699 (1957)
ABSTRACT : The authors have investigated the explosive properties of cast and mechanically mixed AN (I)-lime meal (II) mixtures. The NH₄NO₃ content of I was 99.9%. The II used contained 55.1% CaO. Grain fractions of 0.50-10.75 mm, 0.20-0.50 mm, and < 0.20 mm and II < 0.75 mm [omission?] were tested. The II content in the mixtures was varied from 0 to 40%. The blasting action (BA) of the mixtures was measured with a Tsybul'skiy pendulum, and a Kast [sic] drop test apparatus was

CARD: 1/2

*Okon, S.

OKON, Piotr, dr inż.

Simplified method of determining the coefficient of temperature amplitude damping and shifting the thermal flow phase in uniform partition walls. Gaz woda techn sanit 37 no.12:390-395 D '63.

OKON, Wincenty, prof.

The scientific work of the Institute for Education. Review
Pol Academy 9 no.2:76-83 Ap-Je '64.

1. Director, Ins'titute of Education, Warsaw.

OXON, Wincenty, prof.

Scientific activities of the Institute of Pedagogy. Nauka polska
12 no.2:180-192 '64.

1. Head, Institute of Pedagogy, Warsaw.

OKON, Ye.S.

Chronic stenosing ileitis. Vest. Khir. 77 no.1:121-122 Ja '56

(MLRA 9:5)

1. Iz khirurgicheskoy kliniki (zav.-prof. T.Ya. Ar'yev) Saratovskogo
meditsinskogo instituta.

(ILEITIS

chronic stenosing, surg.)

OKONECHNIKOV, N.

Soviet excavators in France. Vnesh.torg. 30 no.9:23 '60.

(MIRA 13:9)

(France--Exhibitions) (Excavating machinery)

OKONEK, Maciej

Pseudocysts of the pancreas. Pol. przegl. chir. 37 no.1:3-6
Ja '65

1. Z Oddziału Chirurgicznego Szpitala Miejskiego w Gdyni
(ordynator: dr. B. Hryniewiecki).

COUNTRY : USSR
CATEGORY : Farm Animals. 9
 : General Problems.
ABS. JOUR. : RZhBiol., No. 6, 1959, No. 25772
AUTHOR : Okonevskaya, Ye. K.
INST. : ~~Kharkov Institute of Agriculture.~~
TITLE : The Effect of Vitamin A upon the Composition
 of Peripheral Blood of Animals in Relation to
 Its Antid infective Action.
ORIG. PUB. : Zap. Khar'kovsk. s.-kh. in-ta, 1957, 13, (50),
 233-242
ABSTRACT : No abstract.

CARD: 1/1

6

MEDIN, V.V.; YANOV, A.P.; OKONEVSKIY, A.F.; NIKITIN, I.P.; DREBNITSA, A.V.

Production studies of a unit for over-all purification of mine
air. Sbor.nauch.trud.Kriv.fil.IGD AN URSR no.1:43-46 '62.

(MIRA 16:4)

(Mine ventilation—Equipment and supplies)

NEDIN, Y.V.; OKONEVSKIY, A.F.; YANOV, A.P.

Contamination of the air by outbursts in the main ventilation
shafts. Sbor.nauch.trud.Kriv.fil.IGD AN URSR no.1:136-140 '62.
(MIRA 16:4)

(Mine dusts)

OKONEVSKIY, A.F.; VYSOTSKIY, A.V.; DOROSH, F.P.

New apparatus for removing dust samples. Bor'ba s sil. 5:260-264, '62.
(MIRA 16:5)

(Dust--Removal)

Handwritten: H-34

POLAND/Chemical Technology. Chemical Products and Their
Application. Dyeing and Chemical Treatment of
Textile Materials.

H-34

Abs Jour: Ref. Zhur-Khimiya, No 11, 1958, 38393.

Author : Okoniewski Marian

Inst : Not given.

Title : A Contemporary Exposition Concerning the Process of
Treatment of Fabrics Dyed with Vat Dyes in a Steam
Aging Vat

Orig Pub: Przem włokienniczy, 1956, 10, No 9, 406-409.

Abstract: No abstract.

Card : 1/1

ORCHISIDEPI, H.; ESSEVA-NONI, J.

Printing with vat dyes by the piped process. 11. p. 233.

(HAZEDYSI WOKHINICEPI. Vol. 11. , No. 5, May 1957. Warravay, Poland)

EC: Monthly List of East European Accessions (MIL) 10. Vol. 6, No. 1, October 1957. 101.

OKONE 271, Marlan

Resistance to natural and artificial light according to the
most recent studies. Through which is possible to find

- OKONIEWSKI, Roman, RUSZKIEWICZ, Wiktor

Prevention of congenital dislocation of hip. *Pediat. polska* 33 no.5
545-550 May 58

1. Z Kliniki Ortopedycznej A.M. w Gdansk. Kierownik: prof. dr med.
2. Ambros. Adres: dr Wiktor Ruszkiewicz, Gdansk, ul. Swierczeskiego 4/6.
(HIP, disloc.
congen., prev. (Pol))

PORTYCH, Leszek; OKONIEWSKI, Roman; SZWALUK, Franciszek; WRZOLKOWA, Teresa;
BISKUPSKI, Eligiusz; RUSZKIEWICZ, Wiktor

Evaluation of the arterial system of the head of the femur in old
age. Chir.narz.ruchu ortop.polska 24 no.6:499-506 '59.

1. Z Kliniki Ortopedycznej AM w Gdansk. Kierownik: doc.dr A.Senger.
Z Zakladu Anatomii Patologicznej AM w Gdansk. Kierownik: prof.dr
W. Czarnocki.

(FEMUR HEAD blood supply)

PORTYCH, L.; WRZOLKOWA, T.; OKONIEWSKI, R.; BISKUPSKI, E.; SZWALUK, F.;
RUSZKIEWICZ, W.

Morphological picture of the articular cartilage of the head of
the femur in old age. Chir.narz.ruchu ortop.polska 24 no.6:507-
516 '59.

1. Z Kliniki Ortopedycznej AM w Gdansk. Kierownik: doc.dr A.Senger.
Z Zakladu Anatomii Patologicznej AM w Gdansk. Kierownik: prof. dr
W. Czarnocki.

(FEMUR HEAD pathol.)

BISKUPSKI, B.; PORTYCH, L.; OKONIEWSKI, R.; RUSZKIEWICZ, W.; SZWALUK, P.;
SUCHOZEBRSKA, E.

Radiological examination of the femoral heads using the bone plate
method. Chir.narz.ruchu ortop.polska 24 no.6:517-523 '59.

1. Z Kliniki Ortopedycznej AM w Gdansk. Kierownik: doc. dr A.Senger.
(FEMUR HEAD radiogr.)

OKONIEWSKI, R.; RUSZKIEWICZ, W.; SZWALUK, F.; BISKUPSKI, E.; WRZOLKOWA, T.;
PORTYCH, L.; SUCHOZKIBSKA, E.

Localization of the field of fatty degeneration of the bone marrow
in the upper segment of the femur in aged subjects. Chir.narz.ruchu
ortop.polska 24 no.6:525-528 '59.

1. Z Kliniki Ortopedycznej AM w Gdansk. Kierownik: doc.dr A.Senger
i z Zakladu Anatomii Patologicznej AM w Gdansk. Kierownik: prof.
dr W. Czarnocki.

(BONE MARROW pathol.)

(FEMUR pathol.)

RUSZKIEWICZ, W.; OKONIEWSKI, R.; PORTYCH, L.; WRZOLKOWA, T.; BISKUPSKI, E.;
SZWALUK, P.

Morphological changes in the joint capsule of the hip and pericapsular
muscles in old age. Chir. narz.ruchu ortop. polska 26 no.3:235-242
'61.

1. Z Kliniki Ortopedycznej AM w Gdansku Kierownik: doc. dr A.Senger
oraz z Zakladu Anatomii Patologicznej AM w Gdansku Kierownik: prof.
dr W.Czarnocki.

(HIP pathol) (AGIIG)

PORTYCH, I.; OKONIEWSKI, R.; RUSZKLEWICZ, W.; POZNIAK, Z.; SUCHOZEBSKA, E.;
BISKUPSKI, E.

Healing of experimental false joints. Chir. narz. ruchu ortop. polska
26 no.6:665-672 '61.

1. Z Kliniki Ortopedycznej AM w Gdansk Kierownik doc. dr A. Senger.
(PSEUDARTHROSIS exper)

POZNIAK, Z.; PORTYCH, L.; OKONIEWSKI, R.; RUSZKIEWICZ, W.; SUCHOZEBRSKA, E.

Comparative histological and radiological studies on calluses during the course of fracture healing with special reference to false joints. Chir. narz. ruchu ortop. polska 26 no.6:673-685 '61.

1. Z Kliniki Ortopedycznej AM w Gdansk u Kierownik: doc. dr A.Songer.
(FRACTURES) (PSEUDARTHROSIS)

PORTYCH, Leszek; OKONIEWSKI, Roman; RUSZYKIEWICZ, Wiktor; SUCHOWLEBSKA, Ewa;
GLADKOWSKA, Ewa

Further experimental studies on healing of pseudarthrosis.
Chir. narzad. ruchu ortop. Pol. 29 no.2: 287-292 '64.

1. Z Kliniki Ortopedycznej Akademii Medycznej w Gdansk
(Kierownik: doc. dr. med. A. Senger).

1. Abdullahi Yusuf Ahmed, President of Somalia, was

born in 1924 in the town of Yaqshid, in the north of Somalia.

1. Abdullahi Yusuf Ahmed, President of Somalia, was born in 1924 in the town of Yaqshid, in the north of Somalia.

STEFAN OKCZEWSKI

17
 Refining of Indium by distillation. Stefan Okczewski
 (Wojskowa Akad. Tech., Warsaw). *Bul. Wydziału
 Akad. Tech.* 7, No. 3, 3-17(1958).—In was purified by pre-
 heating at 720° and 10⁻⁴ mm. Hg for 4 hrs. in a quartz
 still; the latter was allowed to cool, and cleaned of con-
 densates on walls, and In was distd. at 1200° (10⁻⁴ mm.
 Hg). Traces of Ca, Mg, Si, and V found by spectral analy-
 sis were attributed to the electrodes since Pb, Ag, and Cu
 had been removed. Distn., normal freezing, and re-
 melting applications to In refining are discussed. A. S.

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17

S/137/62/000/001/034/237
A060/A101

AUTHOR: Okoniewski, Stefan

TITLE: Application of the distillation method for purifying certain metals

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 23, abstract 10172
("Arch. budowy maszyn.", 1959, 6, no. 4, 551-576, Polish; Russian
English summaries)

TEXT: A distillation apparatus in the form of a sloping pipe with a collector tank is used for the purification of Zn, Cd, Se, In, and Te. On one side the pipe is closed, and on the other it is connected to a set of vacuum pumps. During the purification process the apparatus is located in a tubular electric furnace, in which the highest temperature exists in the neighborhood of the closed end of the pipe. That part of the pipe constitutes the distillation chamber.

O. Svodtseva

[Abstracter's note: Complete translation]

Card 1/1

29235

P/032/60/007/001/006/006
D220/D301

54800

AUTHOR: Okoniewski, Stefan (Warsaw)

TITLE: The purification of substances by the method of multi-sublimation

PERIODICAL: Archiwum budowy maszyn, v. 7, no. 1, 1960, 139 - 145

TEXT: The paper shows both theoretically and experimentally that it is possible to utilize the change of state of substances from solid state to vapor state directly without passing through the liquid phase, for purifying to a high degree some substances especially semiconductors. The great advantage of the proposed method of sublimation lies in the fact that process of purification can be carried out at temperatures lower than the melting point. Thus low working temperatures are technologically advantageous. However, the success of the process depends on the attainment of low enough pressures and this can sometimes present considerable difficulties. Multi-sublimation (i.e. repeated resublimation) can be conveniently carried out in a horizontal glass or quartz tube. One end of it is

Card 1/3

29205

P/032/60/007/001/006/006
D220/D301

The purification of substances ...

sealed and inserted in a furnace, the other is connected to the vacuum system. Substance A contaminated with a substance B is placed at the sealed end of the tube, air extracted and heating commenced. The mixture is vaporized and the vapor moves towards the vacuum pump. During the transit the density of the contamination changes and therefore the resublimation temperature is altered. The mixture of substance A with lesser content of B will resublimates at a lower temperature (or higher, depending on the nature of substance B) i.e. further along the tube, where the crystals of substance A, slightly purified, will be formed. Now, if the furnace is moved in the direction of the vacuum system, the cycle will be repeated and more pure substance A will be obtained. After number of repetitions the two substances will be separated and deposited at two different places in the tube. The degree of purification will be proportional to the number of resublimations. In practice, the mixture will contain more than two ingredients and in order to extract different products without breaking the tube, a replaceable condensation chamber can be attached to the cold end of the sublimation tube and exchanged each time, when new product is resublimated.

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29235

The purification of substances ...

P/032/60/007/001/006/006
D220/D301

ted. From the numerical data of the melting point, sublimation temperature and pressure it can be concluded that the method of multi-sublimation can be applied to barium, cadmium, magnesium, antimony and zinc. The preliminary investigations carried out by the author showed that this new method is as effective as the process of distillation. The multi-sublimation process as yet, has not been operative on large scale due to its inherently limited scope, difficulty in attaining low enough pressures and cumbersome exchange of resublimation chambers. The automation of the latter would be a great improvement. There are 8 figures and 1 Soviet-bloc reference.

SUBMITTED: September, 1959

Card 3/3

OKONIEWSKI, Stefan

Materials for vacuum devices. Przegl elektroniki 3 no.3: 103-105 Nr '62

OKONIEWSKI, Stefan

Cleaning of metals under reduced pressure by multiple
changes of the state of aggregation. Przegl elektroniki
3 no.11:633-634 N '62.

1. Politechnika, Warszawa.

OKONIEWSKI, Stefan

Methods of producing thin magnetic films. *Wzrostki nauki*
Pol 25:157-158 1963.

1. Technical University, Warsaw.

OKONISHNIKOV, A.M.

Behavior of impregnated elements during the processing of complex
ores. Trudy Akad. Nauk Kazakh. SSR 9:207-220 '60. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov.
(Nonferrous metals—Metallurgy)

S/137/63/000/002/013/034
A006/A101

AUTHORS: Okonishnikov, A. M., Tsyb, P. P., Ponomarev, V. D., Dubina, L. A.

TITLE: Investigating the process of thallium cementation on zinc dust from sulfate solutions

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1963, 30, abstract 20165 ("Sb. tr. Vses. n.-i. gornometallurg. in-t tsvetn. met.", 1962, no. 7, 163 - 171)

TEXT: The authors investigated the effect of the following factors upon the rate and degree of Tl precipitation during its cementation with Zn-dust: consumption of Zn-dust, its coarseness, intensity of mixing, temperature and acidity of the solution. Optimum conditions of Tl precipitation are established: acidity of the solution within pH 3 - 4; or alkalinity within pH 12 - 13; temperature about 60°C; duration 60 minutes at intensive stirring. At a 12 mg/l concentration of Tl in the solution the dust consumption exceeds that of thallium by a factor of 500; and at 100 mg/l and more by a factor of 100. The expediency is shown of turning the sponge for cementation one or two times, since

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Investigating the process of...

S/137/63/000/002/013/034
A006/A101

the sponge is then enriched by a factor of 2 - 3 and the precipitation degree decreases only to 75%.

O. Svodtseva

[Abstracter's note: Complete translation]

Card 2/2

S/137/63/000/002/014/034
A006/A101

AUTHORS: Okonishnikov, A. M., Ponomarev, V. D., Ryabova, N. A.

TITLE: On the problem of thallium and cobalt oxidation by potassium permanganate

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1963, 30, abstract 20166 ("Sb. tr. Vses. n.-i. gornometallurg. in-t tsvetn. met.", 1962, no. 7, 186 - 192)

TEXT: The authors studied conditions of oxidizing Tl and Co during their separate and joint presence in sulfate solutions, and revealed the effect of some foreign ions in the solution upon the joint oxidation of Tl and Co with K permanganate. The initial Tl and Co concentrations in the solution are 100 and 475 mg/l. The solutions were acidified to a necessary concentration of H_2SO_4 , and neutralized to pH 4.5 - 5 by Zn oxide. It was established that changes in the temperature of the solution from 30 to 70°C, in the duration of mixing from 10 to 360 min, and in the initial acidity of the solution, did not substantially affect the degree of Tl oxidation. At pH 5 it was 99.9%. Changes in the tem-

Card 1/2

On the problem of thallium and cobalt oxidation...

S/137/63/000/002/014/034
A006/A101

perature from 20 to 70°C and in the duration of mixing from 15 to 240 min do not affect the degree of Co oxidation. At pH 5 it is equal to 99.9%. Oxidation of Tl and Co during their joint presence proceeds sufficiently fully at a theoretical KMnO_4 consumption. At an increase in the acidity of the solution and in the presence of metal ions (Cu , Zn , Fe^{3+}) the Co oxidation degree is reduced and the degree of Tl oxidation does practically not change. Mn has practically no effect upon Tl oxidation, but the degree of Co oxidation decreases sharply with higher Mn concentration in the solution. Therefore it is necessary to reduce Mn^{2+} concentration in Cd-solutions. This can be achieved by dissolving the initial Cd sponge by H_2SO_4 , but not by the spent Zn-electrolyte.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 2/2

OKONNIKOV, Ye.G.

Electric and galvanomagnetic properties of diluted solid solutions. Trudy Inst. met. no.6:32-40 '60. (MIRA 13:8)
(Solutions, Solid--Electric properties) (Hall effect)

SOV/177-58-2-11/21

17(10)

AUTHORS: Frankfurt, A.I., Colonel in the Medical Service, Professor;
Lin'kova, Z.D.,
Okonishnikova, O.A., Major in the Medical Service, and
Protyanova, K.D.,

TITLE: The Condition of the Liver, Pancreas, and Kidney in Cases of
Chronic Gastritis

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 2, pp 66-69 (USSR)

ABSTRACT: The article deals with the results of observation of 115 patients, similar in age, working conditions and eating habits, with chronic gastritis, showing no indications in anamnesis of any effects on the liver, pancreas, or kidneys. The subjects were all men 20 - 25 years old, of which 20 had been ill up to 6 months, 27 from 7 - 12 months, 50 from 1 - 3 years, and 18 for more than 3 years. 76% showed objective signs of chronic gastritis, while the others showed fewer symptoms. 50 showed an increase in the acidity of stomach secretions, 31 were normal in this respect, 17 showed a decrease in acidity, and in 17 free hydrochloric acid was absent. The

Card 1/2

S/755/61/000/003/027/027

AUTHOR: Okonnikov, Ye. G.

TITLE: Electrical properties of diluted solid substitution solutions.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Metallurgiya i metallovedeniye chistykh metallov, no.3. 1961, 295-305.

TEXT: Alloys based on a transition metal exhibit a peak electrical resistance at a concentration of 0.01-0.1 at % of the second component. The alloys were prepared in a HF induction furnace in a vacuum of 10^{-3} - 10^{-4} torr. The small concentrations required were obtained by addition of higher-concentration ligatures. After prolonged anneal the alloys were rolled into strip less than 1 mm thick. The strip specimens had two longitudinally separated lugs for the resistance (R) measurement (M) and two transversely located lugs for Hall effect M . The critical measurement is that of the physical thickness of the specimen, hence, high accuracy arrangements in many points are prerequisite. The resistance-measuring equipment permitted e. m. f. measurements to within 10^{-8} - 10^{-9} v and up to 5-6 significant figures. A 0.05-a current from 1,000 or 4,000 amp-hr Pb batteries was passed through the specimen. The scatter of the observed R values was 0.01% or less. Pd-Ag system. In this continuous series of solid solutions the resistance-versus-concentration

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Electrical properties of diluted solid...

S/755/61/000/003/02

curve is a monotonic and nearly linear curve for both 273°K and 78°K for A concentrations >0.2%. A resistance hump is observed at 0.13% at 273°K and at 78°K. Fe-W system: Within the range of concentrations this is an oscillation. A R hump occurs at 0.05% at 78°K and a valley at 0.12 at 273°K. A monotonic (slightly convex) rise of R with concentration. The location of the hump coincides with the corresponding extremal values of the self-diffusion coefficient, linear expansion, Young's modulus, optical constants, et al. Fe-A system: At low-concentration R humps are near 0.03% at both 273 and 78°K. The R curves are odd-shaped, with a R minimum at 0.05% for a p-Ag system, Sn, and another minimum at 0.12 Sn at 273°K and at 0.20 Sn at 78°K. The first minimum and the peak coincide with the region of the peculiarities in the structure of the X-ray-absorption spectra. The experimental results are given extensively in terms of I. B. Borovskiy's and K. P. Gurov's "Atomic-blocks". There are 5 figures and 4 references citing 23 sources (19 Russian-language, 1 Russian-language translation of D. Madhann's "Grain Boundaries in Metals", 3 English-language). Thanks are expressed to I. B. Borovskiy, K. P. Gurov, Yu. G. Miller, and other staff members of the Institute of Metallurgy, AS USSR.

ASSOCIATION: MIFI (Moscow Engineering Physics Institute).

Card 2/2

OKONNIKOV, Ye.G.

Electric and galvanomagnetic properties of diluted solid
solutions. Part 2. Trudy Inst. met. no.15:75-78 '63.

(MIRA 16:9)

(Alloys--Electric properties)
(Alloys--Galvanomagnetic properties)

ACCESSION NR: AR4041543

S/0137/64/000/004/1021/1021

SOURCE: Ref. zh. Metallurgiya, Abs. 41126

AUTHOR: Okonnikov, Ye. G.

TITLE: Investigation of role of small impurities of silver in palladium

CITED SOURCE: Sb. Metallurgiya i metalloved. chisty*kh met. Vy*p. 4. M., Gosatomizdat, 1963, 188-193

TOPIC TAGS: silver, palladium, electric conductivity, Hall constant

TRANSLATION: Investigates influence of small impurities of Ag on physical properties of Pd: electrical conductivity, Hall's constant K, and change of resistance in transverse magnetic field

$$\frac{\Delta R_H}{R_0} \sim \omega H^2$$

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ACCESSION NR: AR4041543

where H is field strength, α is the constant. Extreme values of these magnitudes correspond to an Ag concentration of 0.13 at.%. Sharp change of K at 0.13 at.% Ag (almost 2 times) indicates that the effective number of conduction electrons significantly decreases in this region. Maximum of α indicates strong increase of mobility of electrons and holes. Data on concentration of electrons and holes and their mobility and X-ray data about the lattice constants of alloys Pd-Ag allow one directly to calculate each of the terms of resistance. Bibliography: 23 references.

SUB CODE: IC, EM

ENCL: 00

Card 2/2

L 13044-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD

ACC NR: AP5018869 SOURCE CODE: UR/0126/65/020/001/0151/0153

AUTHOR: Okonnikov, Ye. G.

ORG: Moscow Physics Engineering Institute (Moskovskiy inzhenerno-fizicheskiy institut)

TITLE: Effect of small admixtures of alloying elements on the crystal lattice parameter of iron

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 1, 1965, 151-153

TOPIC TAGS: crystal lattice, crystal lattice structure, solid solution

ABSTRACT: Precision lattice parameter measurements were made for dilute solid solutions of Al and W in Fe. W compositions were (at %): 0.055; 0.12; 0.24; 0.51; 1.02; 2.07. Compositions of Al were (at %): 0.03; 0.05; 0.08; 0.12; 0.16; 0.24; 0.37; 0.50; 2.0; 4.0. X-ray patterns were taken with Fe radiation $\lambda K_{\alpha 1} = 1.93597 \text{ \AA}$, $\lambda K_{\alpha 2} = 1.93991 \text{ \AA}$, $\lambda K_{\beta 1} = 1.75654 \text{ \AA}$. Preliminary determination of lattice parameters, Miller indexes and Wulff-Bragg angles was made by the Debye method using an RKD camera while precision measurements were made with an RKE camera. A high degree of precision was attained by the application of large Wulff-Bragg angles ($\theta = 60-60^\circ$) for lattice parameter determination. For Fe

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UDC: 539.292; 548.4

L 13044-66

ACC NR: AP5018869

$K_{\alpha 1}$ and $K_{\alpha 2}$ 220 ($\theta = 73^\circ$) reflections were used and for Fe $K_{\beta 1}$ the 310 ($\theta = 76^\circ$) reflections were used. The three K lines were focused simultaneously on the x-ray film. Line measurements were made on a IZA-2 horizontal comparator with a limit error of .9 microns. Scatter of the values for the three lines and for various x-ray patterns was very slight (0.003%). Lattice parameter vs composition curves are shown in fig. 1. The curve for W compares to the curve of resistivity vs composition except for the region of small admixtures where at 0.055% there

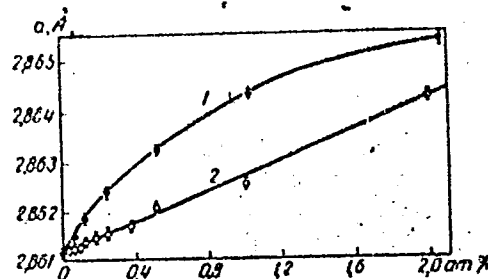


Fig. 1. The lattice parameter of iron as a function of the concentration of admixtures of W and Al in dilute solutions of Fe-W (curve 1) and Fe-Al (curve 2).

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ACC NR: AP5018869

is a maximum in resistivity. Within the limits of experimental error, the lattice parameter curves do not show the anomaly at small admixtures shown by other physical properties. The lattice parameter vs Al addition curve is linear which also is reminiscent of the electrical resistivity curve for Fe-Al compounds. The effect of monotonic increase in the parameter of the crystal lattice resulting from an increase in the concentration of the admixture with the greater atomic radius appears to predominate over the effect of anomalous changes in the parameter stemming from an additional bond in the metal in the locality of the admixture. Monotonic changes in the parameter of the crystal lattice also indirectly support the validity of this method of determining the concentration of admixtures. In conclusion I wish to thank I. B. Dorovskiy for his attention and Ye. V. Budko for his assistance in making the measurements. orig. art. has: 1 figure.

SUB CODE: 11/ SUBM DATE: 21Jul64/ ORIG REF: 012/ OTH REF: 000

Card 3/3

L 13551-66 ENT(m)/T/EWA(m)-2

ACC NR: AP6001154

SOURCE CODE: UR/0367/65/002/003/0471/0184

AUTHOR: Anikina, M.; Vardenga, G.; Zburavleva, M.; Kotlyarevskiy, D.; Lukatin'sh, Yu.; Mestvirishvili, A.; Nyagu, D.; Okonov, E.; Wu, Tsung-fang; Chkhaldze, L.; Takhtamyshev, G.

ORG: Joint Institute of Nuclear Research (Ob'yedinennyy institut yadernykh issledovaniy); Physics Institute, Academy of Sciences, Gruzinskaya SSR (Institut fiziki Akademii nauk Gruzinskoy SSR)

TITLE: Investigation of K_2^0 -meson decays 1944.5

SOURCE: Yadernaya fizika, v. 2, no. 3, 1965, 471-481

TOPIC TAGS: K meson, meson interaction, lepton, radioactive decay, selection rule, pion

ABSTRACT: The authors presented at the 12th International Conference on High Energy Physics, Dubna, 1964, preliminary results of analyses of 683 K_2^0 -mesons detected in a Wilson chamber. In the present article, the authors present a more complete analysis using a larger statistical material (1082 K_2^0 -mesons). The following probabilities were obtained for leptonic decays of the K_2^0 -meson and for the decay $K_2^0 \rightarrow \pi^+ + \pi^- + \pi^0$ (with respect to all K_2^0 -decays into charged particles): $\Gamma_2 (+ - 0) / \Gamma_2$

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(charged) = 0.194 ± 0.024 and $\Gamma_2(Ke_3) + \Gamma_2(K\mu_3) / \Gamma_2(\text{charged}) = 0.806 \pm 0.090$. The data on leptonic decays exclude the S-type interaction and are in good agreement with the V-type interaction and the predictions based on the $|\Delta I| = 1/2$ selection rule. The energy spectrum of η^0 -mesons in the $K^0 \rightarrow \pi^- + \pi^+ + \gamma$ decay differs significantly from the phase curve $\phi(T_0)$. The value $\alpha = -8.2 \begin{smallmatrix} -1.3 \\ -0.9 \end{smallmatrix}$ was obtained for the coefficient α in the linear approximation $dW(T_0)/d\phi(T_0) = 1 + \alpha T_0/M_{K^0}$, which is also in good agreement with the $|\Delta I| = 1/2$

selection rule. Assuming the existence of a δ -dipion resonance, the following values are obtained for its mass and width: $M_\delta = (350 \pm 10)$ MeV and $\Gamma_\delta = (75 \pm 15)$ MeV. In conclusion, the authors consider it their pleasant duty to thank B. M. Pontecorvo [Pontecorvo] for fruitful discussions and constant interest in the work; V. I. Yeksler, I. V. Chuyillo and the entire staff of the proton-synchrotron, who assured the execution of the experiment; and E. L. Andronikashvili, V. P. Dzheleпов, and Z. Sh. Mandzhavidse for assistance in the work.

Authors also extend their thanks to the group of laboratory technicians and mechanics consisting of N. I. Grafov, L. Goncharov, P. Zhabin, I. Lyubimov, D. Sverdilo, V. Smirnov, Y. Stepanov, I. Filatov, and L. Filppov, and the students O. Dumbraiya and V. Novikov for performing the calculations. Orig. art. has: 10 figures, 4 tables, and 1 formula.

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16099-f
ACCESSION NR: AP500045

6 3055/64/047/005/1868

AUTHORS: Lyuboshits, V. L.; Okonov, E. G.; Podgoretskiy, M.

TITLE: Effect of medium on properties of neutral kaon K^0 \bar{K}^0 pairs

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki
no. 5, 1964. 1868-1871

TOPIC TAGS: K meson; K particle; pair theory; particle interaction

ABSTRACT: The purpose of the investigation was to ascertain the influence of the medium on the interference phenomena occurring in $K^0\bar{K}^0$ systems and to estimate the accuracy of the usual approximation within the framework of which the K^0 mesons are regarded as free. In estimating the influence of the coherent interaction of the K^0 and \bar{K}^0 mesons with the medium on the properties of the $K^0\bar{K}^0$ pairs

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ACCESSION NR: AP5000345

the authors obtain a system of basic functions for such pairs in the medium, and note the specific features of the interference phenomena in the systems $K^0\bar{K}^0$, $K_1^0 K_2^0$, $K_1^0(K_2^0)$, and $K^0(\bar{K}^0)$. It is shown that the equations for $K\bar{K}$ pairs previously derived by the authors (Okonov et al., ZhETF v. 43, 720 and 1362, 1962) for the K^0 mesons regarded as free, are subject to an error which can reach 10% and which must be taken into account. Orig. art. has 18 formulas.

ASSOCIATION: Ob'yedinenyy Institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: 13May64

ENCLOSURE

SUB CODE: NP

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OTHER

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ASD(a)-5/AFWL/AB(mp)-2/AFETR/RAEM(j)/ESD(ga)/ESD(t)/IJP(e) JD/QG

ACCESSION NR: AP5001859

R/0056/64/047/006/212

AUTHOR: Drabkin, G. M.; Zabidarov, Ye. I.; Kasban, Ya. A.; Okorokov, A. A.; Trunov, V. A.

TITLE: Scattering of neutrons by spin waves in iron

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5, pp. 2316-2318

TOPIC TAGS: neutron scattering, spin wave, polarization, spin flip, iron crystal

ABSTRACT: The authors report the results of experiments on the scattering of polarized neutrons by single-crystal iron, aimed at investigating the excitation and absorption of spin waves in small-angle neutron scattering. The experimental set-up is shown in Fig. 1 of the enclosure. The mirror system made it possible to obtain intense beams of quasiochromatic neutrons with polarization degree up to 80% without beam broadening. The sample was placed in a 26 kO field. The measurements were made at scattering angles in the range 6--20'. The results indicate that the cross section for neutron scattering with spin-wave excitation

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is not equal to the cross section for scattering with absorption, and that with increasing scattering angle absorption predominates over excitation, in agreement with calculations made by S. V. Maleyev. Scattering of an unpolarized beam at approximately the same angles resulted in a polarization on the order of 10%. It is concluded that scattering of neutrons by spin waves is actually accompanied by spin flip, and that the character of scattering depends on the parameter k/k_0 (E - energy of incident neutrons). "S. V. Maleyev participated in an evaluation of all stages of the work and we are grateful to him for valuable advice. We thank D. M. Kazinker for continuous interest in the work and for a discussion. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences SSSR).

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ENCLOSURE 3

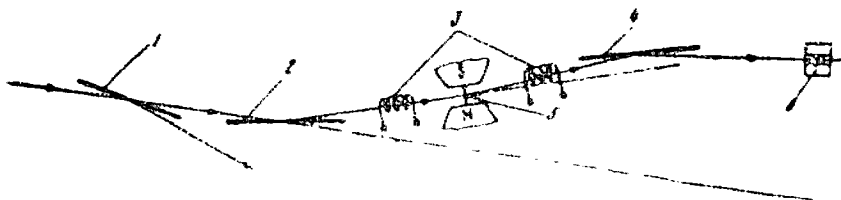


Fig. 1. Diagram of set-up: 1 - Mirror of nickel on quartz substrate, 2 - polarizer, 3 - radio frequency coils for neutron spin flip, 4 - analyzer, 5 - sample, 6 - detector.

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Oxonov, E.O.

26-11-5/16

AUTHORS: Lapidus, L.I., and Oxonov, E.O.

TITLE: The Latest Research in the Physics of Fundamental Particles (Noveyshiye issledovaniya fiziki fundamental'nykh chastits)

PERIODICAL: Priroda, 1957, # 11, p 33-42 (USSR)

ABSTRACT: In 1956 the USSR opened the Joint Institute of Nuclear Research, placing it at the disposal of scientists from all Communist dominated countries. The Institute is furnished with the most modern equipment. It has a synchrocyclotron producing protons with an energy of up to 680 mev and, since April 1957, a synchrophasotron (Fig. 1), which can accelerate protons up to 10 Bev. With the synchrocyclotron the first experiments of scattering neutrons by neutrons could be inquired into, and it will also prove very useful for the study of the interaction between π -meson and nucleons, while the powerful accelerator opens new possibilities for the investigation of antiparticles. To discover exhaustive facts about the laws of interaction between elementary particles, many more experiments are needed, and in this work the Joint Institute will play an important part. As to the methods of observing the reactions of high energy particles, the authors point out that photographing by means of very thick emulsion

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The Latest Research in the Physics of Fundamental Particles

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plates covered with a layer of frozen hydrogen (-259°C) has proved very effective. Diffusion chambers are especially used for studying cascade hyperons and Λ -mesons. The latest method of registering charged particles is the application of "bubble chambers" (Description in # 10 of "Priroda", 1955, p 79-81) Scintillation counters and Cherenkov counters (Fig. 5) are two additional devices which are being successfully used by the Institute for discovering particles whose properties are theoretically predictable, as was the case with antiprotons and antineutrons. At the present time it may be considered an established fact that the laws of interaction between neutrons do not differ from those between protons, and that neutrons and protons are very much alike, which is of fundamental importance in nuclear physics. There are 11 photos, 2 charts, 1 graph and 2 references, of which both are Slavic (Russian).

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