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ABSTRACTS FROM EAST EUROPEAN
SCIENTIFIC AND TECHNICAL JOURNALS
No. 133
(Chemistry Series)
Best Available Copy
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ABSTRACTS FROM EAST EUROPEAN
SCIENTIFIC AND TECHNICAL JOURNALS

No. 133
- Chemistry Series -

This report consists of abstracts of articles from the East European scientific and technical journals listed in the table of contents below.

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Zeitschrift fur Anorganische und Allgemeine Chemie,
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Roczniki Chemii, Warsaw, Vol 37, No 2, 63

Roczniki Chemii, Warsaw, Vol 37, No 3, 63
SPAENAU, H. [Affiliation not given].

"Gerhart Jander"


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KRIEGSMANN, H. [Affiliation not given].

"Arthur Simon"


Abstract: Obituary of Arthur Simon (1895-1962), with main events of his student- and professional activities, and a sketch of his publications.
ROEN, F., and ROMEIS, H., of the Institute of Inorganic Chemistry (Institut fur anorganische Chemie) of the Johann Wolfgang Goethe University (Johann-Wolfgang-Goethe-Universität), Frankfurt (Main).

"Influence of the Oxide Distribution on the Sintering Behavior of Aluminum Powders"


Abstract [Authors' English summary]:

Al powder, prepared by pressing molten Al through a jet, was milled under different liquids and at different partial pressures of oxygen in a ball mill. The resulting powders were heated and their recrystallisation was investigated. Of the primary crystallites, the mean size and the lattice distortions were derived from the integral widths of their x-ray diffraction lines. A well defined relation between the crystalline state of the powders and the "hot hardness" of pressed specimens was found. The relation can be explained by the theory of distortions.

[32 references, predominantly Western].

EAST GERMANY

SCHWACHAU, K., and HERR, W., of the Institute of Nuclear Chemistry (Institut fur Kernchemie) of the University of Cologne (Universität Köln) and the Julich Nuclear Research Establishment (Kernforschungsanlage Julich).

"Contributions to the Complex Chemistry of Technetium, II. Preparation and Properties of Potassium Cyanotechnetate(I)"


Abstract [Authors' English summary]:

Cyanotechnetate(I) was prepared by reduction of $^{99m}$TcO$_4^-$ or ($^{99m}$Tc(OH)$_6$(CN)$_6$$)^{3-}$ with potassium amalgam in the presence of KCN. The potassium salt was isolated in the form of bright olive-green, cubic face-centered crystals. It is isotypic with K$_4$[Mn(CN)$_6$] and K$_4$[Ru(CN)$_6$]. In addition, the absorption spectra of these three complex cyanides are very similar to each other; so we attribute the analogous formula K$_4$[Tc(CN)$_6$] for the potassium cyanotechnetate(I). The lattice constants of the complex salts were determined;

Abstract [Authors' English summary]:

Boiling solutions of metal(II) sulphates react with freshly precipitated HgO forming CoSO₄ · 2 HgO, MnSO₄ · 2 HgO, CaSO₄ · 2 HgO, and ZnSO₄ · 2 HgO, which are analogous to HgSO₄ · 2 HgO. Furthermore, CdSO₄ · 1.67 HgO · 0.33 H₂O and NiSO₄ · HgO · H₂O are formed. The substances have characteristic X-ray diagrams, they are stable against cold water, become destroyed by hot water and are soluble in diluted mineral acids.
EAST GERMANY

WOLF, E., STAHN, W., and SCHONHERR, H., of the Institute for the Applied Physics of Pure Substances (Institut für Angewandte Physik der Reinstoffe), Dresden.

"Thermochemistry of Halogeno Silanes, II. Enthalpies of Formation of SiBr₄ and 3iHBr₂³³"


Abstract [Authors' English summary]:

In a calorimetric study the enthalpies of solutions of SiBr₄ (1) and SiHBr₅ (1) in diluted NaOH solution were found to be \(-142,0 \pm 0,5\) kcal/mole and \(-152,0 \pm 0,6\) kcal/mole. The values resulting for the enthalpies and free enthalpies of formation under standard conditions are given (in kcal/mol):

\[
\begin{align*}
\text{SiBr}_4: & \quad \Delta H^\circ = -108,0 \pm 2,0; \Delta H^\circ = -99,0 \\
& \quad \Delta G^\circ = -99,0 \pm 2,0; \Delta G^\circ = -94,5 \\
\text{SiHBr}_5: & \quad \Delta H^\circ = -78,8 \pm 2,0; \Delta H^\circ = -74,0 \\
& \quad \Delta G^\circ = -69,0 \pm 2,0; \Delta G^\circ = -72,4.
\end{align*}
\]

[18 references, mainly Western].

EAST GERMANY

JERE, G.V., and PATEL, C.C., of the Department of Inorganic and Physical Chemistry of the Indian Institute of Science, Bangalore, India.

"Preparation and Properties of Hydrated Titanium Peroxide"


Abstract [English article; authors' English summary]: A method of preparation of titanium peroxide free from adsorbed impurities is described. The peroxide has an unstable true peroxy group and two hydroxy groups for every titanium atom. The instability and structure of the compound are discussed. [27 references, of which 25 Western].
"Coordination-Chemical Studies on Zino Dialkyls, I. Coordination Compounds of Zino Dimethyl with Cyclic Aliphatic Ethers"


Abstract [Author's English summary]:

Zinkdimethyl yields with ethylene oxide, trimethylene oxide, tetramethylene oxide and pentamethylene oxide liquid coordination compounds with one or two other molecules. These compounds may be distilled under atmospheric pressure. The strength of the bond between the zinkdimethyl and the other molecules and the possibility of the coordination of a second other molecule increases from ethylene oxide to pentamethylene oxide. In the same direction decreases the sensibility against atmospheric oxygen.

[18 references, predominantly Western].

"On the Existence of Peroxo Compounds of Lead"


Abstract [Author's English summary]:

The reaction product from lead nitrate and hydrogen peroxide formed in the presence of carbonate is no adsorption compound of PbO, but a real peroxy compound of the composition PbO.3CO2.2O. This is concluded from X-ray measurements and the determination of the decrease in weight and content of active oxygen.

[13 references, mainly Western].
DUBEY, K. C., and GUPTA, C., of the Department of Chemistry of the University of Allahabad, Allahabad (India).

"Studies on Thiosalts, IV. Formation of Thiosalt from Antimonous Sulfides"


Abstract [Authors' English summary]: From the solubility of antimony (III) sulfide in alkaline sulfide solutions, the stability and hydrolysis constants of the assumed reaction product, the thiosalt Sb₂S₄₃ have been estimated. [4 references, of which 1 Russian, rest Western].


EAST GERMANY

BAUDLER, H., and FRICKE, O., of the Institute of Inorganic Chemistry (Institut für Anorganische Chemie) of the University of Cologne (Universität Köln).

"Contributions to the Chemistry of Phosphorus, XVI. Reaction of Diposphorus Tetraiodide with Oxygen: On a Polymeric Phosphorus-Oxide-Iodide"


Abstract [Authors' English summary]:

According to the nucleophilic character of lower-valent phosphorus atoms, diphenylnitrosymmetry reacts readily with oxygen even under mild conditions, the oxygen uptake of CS solutions amounting from 0 0 to 1.6 mole per mole P 2 I 6. In the reaction a new polymeric phosphorus oxido-iodide of the average composition (P 2 I 6 O 6) n (containing about 40 percent of the reactant phosphorus) and P I 3 (about 60 percent of I) are formed. The oxidation approximately follows the equation:

\[
\frac{7}{2} P_2 I_6 + \frac{3}{2} O_2 \rightarrow \frac{2}{n} (P_2 I_6 O_6)_n + 5 P I_3
\]

EAST GERMANY


The new phosphorus oxide-CI oxide is amorphous by X-ray examination, insoluble in indifferent solvents, and undergoes strongly exothermic hydrolysis yielding H I, H I P O 4, H P O 3, and H P O 4 in addition to smaller quantities of H P O 3 and PH 3, during which elementary reaction occurs as an intermediate. The IR spectrum is remarkably similar to that of P 2 O 5 and agrees with the chemical behavior - supports the assumption of the group O, O as preferred structure element. Polymerization of this group should produce

[30 references, mainly Western].
"Isolation of Tetramethyl Titanium"


Abstract [Authors' English summary]:

The preparation and isolation of tetramethyl titanium is described. Ti(CH₃)₄ forms bright yellow crystals which are very sensitive to air and moisture and undergo thermal decomposition at temperatures above approximately -78°C forming metallic titanium.

[14 references, all Western].

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"On Niobium Cyano Compounds"


Abstract [Authors' English summary]:

By the reaction of hydrogen cyanide with niobium pentachloride under various conditions, especially in the presence of organic solvents, the compounds NbCl₅CN·(C₂H₅)₂O, H(NbCl₄CN) and H(NbBr₂CN) are prepared. H(NbCl₄CN) has the constitution of an acid and forms a salt with triethylamine, the solution of this salt in organic solvents having electrolytic character.

[5 references, all Western].

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Leipzig, Zeitschrift fur Anorganische und Allgemeine Chemie, Vol. 319, No 5-6, Jan 63; pp 244-252.

Abstract [Authors' English summary]:
A favorable process for synthesizing alkoxy dialcynes, \((\text{RO})_2\text{Si}_{\text{NH}}\), is based on the direct introduction of \(\text{NH}_2\) into a reaction mixture consisting of \(\text{SiCl}_4\) and the respective alcohols, followed by distillation of the reaction products (alkaalkoxy alanes, hexaalkoxy dialcynes, alkoxy poly- and cycloalanes) from the reaction vessel. This method is applicable to \(\text{SiCl}_4\), \(\text{R}_{\text{NH}}\text{SiCl}_3\), \(\text{R}_2\text{SiCl}_2\) \((\text{R} = \text{CH}_3, \text{CH}_2\text{CH})\) as well as to alcohols containing the groups \(-\text{CH} = \text{OH}\), \(-\text{OH}\), \(-\text{CH} = \text{CH}_2\text{OH}\). There is no difficulty to prepare kg quantities in \(30\%\) to \(50\%\) yields.

New dialcynes are described.

[13 references, mostly Western].


Abstract [Authors' English summary]:
The preparation of cyclopentadienyl chromium(III) halogen complexes of the type \(\text{Cr}_{\text{Cp}}\text{Hal}_2\cdot\text{Hal} = \text{Cl-, Br-}, \text{I-}; \text{Hal} = \text{pyridine, triphenylphosphine, e.g.} \) from suitable systems is described. The complexes being soluble in polar organic solvents exhibit three unshared electrons belonging to the central equivalent \(\text{Cr}(\text{III})\).

Like in ferrocene, the cyclopentadienyl ring is ring-bonded.

The deep-blue solutions formed on interaction between \(\text{Cr}(-\text{Cp})_2\) and hydrochloric or hydrobromic acid contain the anions \([\text{Cp}_2\text{CrHal}_4]^-\) which have been isolated as \(\text{NH}_4\) salts.

[15 references, all Western].
On the Existence of Polynuclear Gaseous Iron- and Manganese Oxides


Abstract [Authors' English summary]:

By means of a micro apparatus, the gas densities of vapourized FeO, FeO₄, MnO₄, and Mn₂O₃ have been determined. The obtained data indicate the existence of polynuclear gaseous oxides. Gaseous FeO, MnO₄ and/or (FeO)₄ and (MnO₄)₄, respectively, are supposed to be the vapour species.

[19 references of which 1 Eastern].

EAST GERMANY

GOUBEAU, J., and WESSER, U., of the Laboratory of Inorganic Chemistry (Laboratorium für Anorganische Chemie) of the Stuttgart College of Engineering.

"On Selenyl Methylimide"


Abstract [Authors' English summary]:

The reaction of SeOCl₂ with methyl amine leads to small yields of dimeric (OSeNCH₃)₂ and larger amounts of an insoluble polymer. The monomeric form has not been found. In the dimeric one, a four-membered Se₂N₂ ring exists which undergoes further polymerisation on raising the temperature. On rapid heating a sudden deflagration by intramolecular combustion occurs.

[14 references, predominantly Western].
"Processes in the Systems Carbonylferrates/Nitrite and Hydroxylamines"


Abstract [Authors' English summary]:

The stoichiometry and course of the reaction of aqueous alkaline solutions of tetra-carbonyl ferrate with nitrite are investigated. At first occurs an oxidation to bi- and trinuclear carbonyl ferrates, followed by a disproportionation with nitrite yielding nitrosyl-tricarbonyl ferrate, [Fe(CO)₅NO], and atomic iron. From hydroxylamine and carbonyl ferrate, the anion [Fe(CO)₅NO]⁻ results too, in addition to di- and tricarbonyl ferrate, [Fe(CO)₅NH]₄, and iron(III) hydroxide.

[11 references, all Western].
Koch, Walter, and Kolbe-Rohde, Helga, of the Max Planck Institute for Iron Research (Max-Planck-Institut für Eisenforschung), Düsseldorf.

"Contribution to the Kinetics of Carbide Formation in Chromium Steels"


Abstract [Authors' English summary]:

With increasing Fe content, an almost 1.4% decrease of the lattice constant a of hexagonal chromium carbide mixed crystals, (Fe, Cr) 2C, occurs, whereas the constant c remains nearly constant.

The transformation of the χ mixed crystals of chromium steels with more than 3% Cr yields in the temperature range of 600-700°C at first orthorhombic (Fe, Cr) 2C which is consumed on longer heating by formation of the hexagonal carbide. This furtherly takes up chromium from the Cr-containing α-Fe mixed crystals being also present.
NAST, R., and RICHERS, C., of the National Chemical Institute (Chemisches Staatsinstitut) and the Institute of Inorganic Chemistry of the University of Hamburg.

"Alkynyl Compounds of Transition Metals, XIX. Acetylides of Cadmium"


Abstract [Authors' English summary]:

A solution of Cd(C_5H_5)_2 in ether reacts with phenyl acetylene forming the crystalline Cd(C_5H_5C=CH_2), which is soluble in liquid ammonia as a non-electrolyte. - Cd(NH_3)_2 forms in liquid ammonia with gaseous acetylene Cd(C_5H_5C=CH_2), z NH_3 which is decomposed at 0°C to the carbide Cd_2: 0.6 NH_3. - According to the equation

\[ \text{Cd(SCN)}_4 + 4 \text{K}_2 \text{C}_5 \text{H_4} \rightarrow \text{Ba(C}_5 \text{H_4C=CH}_2 \text{)}_2 + 4 \text{KSCN} \]  

the complexes Ba[Cd(C_5H_5C=CH_2)] and K_4[Cd(C_5H_5C=CH_2)] could be isolated. - The IR-spectra are discussed.

[7 references, all Western].

SCHAFER, H., SCHNEIDERSEIT, G., and GERHARDT, W., of the Inorganic-Chemical Institute of the University of Munster (Westphalia).

"Chemistry of the Platinum Metals. RuO_2: Chemical Transport, Properties and Thermal Decomposition"


Abstract [Authors' English summary]:

The preparation of RuO_2 crystals by means of chemical transport is described. The lattice parameters of the tetragonal RuO_2 were found to be: a = 4.69 ± 0.005; c = 3.11 ± 0.006 Å. The specific conductivity determined with single crystals is \( n = 3 \times 10^4 \) Ohm\(^{-1}\) cm\(^{-1}\) at 20°C.

The study of the equilibrium RuO_2 = Ru + O_2 by means of a glowing filament, with the thermo-balance, and by static pressure measurements yielded that the oxygen pressure is much lower than the corresponding literature data. The oxygen pressure of 1 atm is reached at 1660°C. The enthalpy of formation of RuO_2 is \( \Delta H (298) = -71 \) kcal/mol.

[23 references, mainly Western].

[1/1]
EAST GERMANY

SCHENK, P.W., and WOLST, W., of the Institute of Inorganic Chemistry of the Free University (Freie Universität), Berlin.

"On Sulfur Monoxides, XIV. Experiments Related to the Preparation of Pure S₂O"


Abstract: [Authors' English summary]:

Experiments are described to prepare pure S₂O by reaction of gaseous sulfur with sulfur monoxide. It was possible to obtain a gaseous mixture with a molar composition of S₂O = 1.8:1 corresponding to a S₂O content of 85%. Repeating experiments of KOWALSKA and KOWALSKY it was not possible to reproduce their result, that the gaseous phase should have the composition S₂O = 1:1 if SO₂ is subtracted.

It is found that monomeric SO is a short-lived very reactive molecule which can react according to

\[ \text{SO} = \text{S}_2\text{O} + \text{SO} \]

or with gaseous sulfur according to

\[ \text{SO} + \text{S} = \text{S}_2\text{O} \] [24 references, mainly Western]

EAST GERMANY

SCHMIDT, K., and EICHELSDORFER, D., of the Institute of Inorganic Chemistry of the Phillips University (Philipps-Universitat), Marburg/Lahn.

"On Sulfur Acids, XXVII. Contribution to the Understanding of Sulfuryl Thioyanate SC₂(SCH)₂"


Abstract: [Authors' English summary]:

As the first compound containing a chain of three sulfur atoms in which the middle atom is linked to two ligands and whose "free" electron pair are therefore unable to interact with d-orbitals of neighbouring atoms, sulfuryl thioyanate, NCS-S-SCN, has been synthesized from sulfuryl chloride and alisyl thioyanate in organic solvents at low temperatures. The behaviour of the new compound which can not be isolated in substance proves the pronounced instability of "real" sulfur-sulfur single bonds (not strengthened, as usual). Earlier reports on the preparation of sulfuryl thioyanate are shown to be wrong.

[26 references, all Western]
"Behavior of Silicic Acid Esters in Ammonia Systems"


Abstract [Authors' English summary]:

The methyl esters of ortho- and dianilic acid, Si(OCH₃)₃ (I) and Si(CH₃)₂(OCH₃)₂(OH) (II), behave in liquid NH₃ as "anhydrous acids". The reactions with KNO₃ give rise to the formation of amidates which spontaneously split off HOC₂H₄; the methylate then combines with the unchanged ester yielding the methoxamidates K(Si(OCH₃)₃) and K₂O(Si(OCH₃)₃). As a secondary reaction product starting from (I), K[N(Si(OCH₃)₂OH)] has been isolated; the corresponding compound starting from (II) has not been obtained. It has, however, been synthesized treating [Si(OCH₃)₂(OH)]₂ with NH₃; the resulting cyclic compound (formula see "Inhaltsübersicht") was converted into the dipotassium salt by means of KNO₃.

[18 references, mainly Western].

"On Alkali- and Alkali-Earth- Oxobismutates (V)"


Abstract [Authors' English summary]:

By heating mixtures of Li₂O and Bi₂O₃, in C₂ atmosphere, the oxobismutates(V) Li₂BiO₄, Li₂Bi₂O₅, and Li₂Bi₂O₄ have been prepared; hydrolysis of these salts yields the oxobismutate

Li₂BiO₄ - eq.

In the case of BaO/Bi₂O₃ mixtures, complete oxidation to Bi(V) at 950-1000°C is only achieved if Bi₂O₃/BaO ≥ 5:1. The most basic compound being obtained is Ba₅(Bi₂O₅)₄. If the mentioned ratio is ≤ 4, Bi(III)-containing reaction products result. For Ba : Bi = 1 : 2-5.5, one single phase which is isomorphous with (NH₄)₂Fe₂O₄ exists; the same structure have also Ba₅Bi₂O₈ and Ba₂Bi₂O₈ ( = Ba₃Bi₂O₇)²⁺.

In the system Na₂O/Bi₂O₃, Na₂BiO₃ and, probably, Na₂Bi₂O₄ occur in addition to the well-known Na₂BiO₃.

[10 references, mainly Western].
"Contributions to the Chemistry of Alkali M(=pyr) sulfates"


Abstract [Authors' English summary]:

A method is described to determine by titration the anions $\text{SO}_4^{2-}$, $\text{HSO}_4$, $\text{SO}_3^-$, and $\text{H}_2\text{SO}_3$ in presence of each other. The rate of hydrolysis and the catalytic effect of various cations on the hydrolysis of $\text{SO}_4^{2-}$ was determined. It was not possible to verify the existence of isomeric disulfates $\text{Me}_2\text{SO}_4, \text{SO}_3$ of the alkali metals.

[21 references, mainly Western].

EAST GERMANY

WINKHAUS, G., of the Institute of Inorganic and Nuclear Chemistry of Mainz University.

"On a Further Reduction Product of the Benzene-Manganese-Tricarbonyl Cation"

Leipzig, Zeitschrift für Anorganische und Allgemeine Chemie, Vol 319, No 5-6, Jan 63; pp 404-408.

Abstract [Authors' English summary]:

The reduction of the benzene-manganese tricarbonyl cation by sodium borohydride or lithium aluminium hydride gives small quantities of a neutral product, in addition to the already known $\pi$-cyclohexadienyl manganese tricarbonyl. Reactions and IR spectrum of the new compound suggest the formulation as cyclohexadienyl manganese tricarbonyl hydride.

[7 references, mainly Western].

1/1
Studies on Amorphous Forms of Ta₂O₅

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 125-131.

Abstract: Author's English summary modified. Some properties of tantalum pentoxide prepared from tantalum oxalate and properties of fluorotantalic acid have been examined. Their changes resulting from thermal processing in the temperature range 100 to 900° C have also been investigated.
1 table; 6 diagrams; 6 Eastern references.


Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 133-144.

Abstract: Author's English summary modified. Attempts at estimating the strength of the intramolecular hydrogen bonds in 1-acetylnaphthol-2 and 2-acetylnaphthol-1 were made by measuring their dipole moments and IR spectra in various solvents. 3 diagrams; 3 tables; 19 references, largely Western.
GRONOWSKA, Janina and HELD, Jozef; Department of Organic Chemistry (Katedra Chemii Organicznej) and Department of Experimental Physics (Katedra Fizyki Doswiadczalnej) of the N. Copernicus University (Uniwersytet M. Kopernika), Torun.


Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 145-152.

Abstract: [Authors' English summary modified] The UV and visible region absorption spectra of phenolguaiaacolphthalein and guaiacolphthalein in absolute alcohol, in buffer solutions of pH: 10, 11.5, 12.2, 12.9, and 0.1 N and 2 N NaOH aqueous solutions, in 0.05% NaOH alcohol solution and in 76% H₂SO₄ were investigated. 6 diagrams; 2 tables; 15 references, mostly Western.

MALAWSKI, Marek J. and DRAPALÅ, Tadeusz; Department of Organic Chemistry of Warsaw University (Katedra Chemii Organicznej Uniwersytetu, Warszawa); Department of General Chemistry of the Main School of Rural Economy (Katedra Chemii Ogólnej, Szkoła Głównej Gospodarstwa Wiejskiego), Warsaw.

"Special Cases for Applying the Hammett Equation. II. Ionization Constants of Ortho-Substituted Aniline Derivatives"

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 153-163.

Abstract: [Authors' English summary modified] The relative acid ionization constants of anilinium ions of 4'-substituted 2-aminobiphenyls have been determined potentiometrically. The logarithms of Kₐ plotted against the value of from Hammett's equation were found to fall in one line with a slope Φ = +0.756 and a standard deviation 0.023. 2 tables; 2 diagrams; 15 references, all Western.
KURYSZENSKI, Gotfryd and FORMELA, Malgorzata; Department of Organic Chemistry, Higher Teacher's College (Katedra Chemii Organicznej, Wyza Szkoła Pedagogiczna), Gdańsk.

"On Depsipeptides. III Application of Tert-Butyl α-Bromo-propionate in the Syntheses of Depsipeptides of Lactic Acid"

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 161-165.

Abstract: Author's English summary modified The depsipeptides of lactic acid were synthesized by applying tert-butyl-α-bromo-propionate. Di- and tridepsipeptide derivatives were obtained. 3 tables; 3 references, one Western, 2 Eastern.

S POLAND

BISANZ, Teresa and PRZYNIER, Jan; Department of Organic Chemistry, Warsaw Politechnic (Katedra Chemii Organicznej, Politechniki Warszawskiej); Institute of Organic Synthesis of the Polish Academy of Sciences (Zakład Syntezy Organicznej Polskiej Akademii Nauk), Warsaw.

"The Orientation in the Friedel-Crafts Acylation of α- and β-Naphthol Derivatives. IV. The Reactions of 2-Methyl-naphthorexorcincol Dimethyl Ether with Acetyl and Benzoyl Chlorides"


Abstract: Author's English summary The orientation in the Friedel-Crafts reactions of 1,3-dimethoxy-2-methyl-naphthalene with acetyl and benzoyl chlorides has been studied. 7 diagrams; 4 references, mostly Eastern.
WARSAW, Roczniki Chemii, Vol 37, No 2, 63, pp 179-185.

Abstract: Author's English summary modified A description is given of how certain bromo-2-mesyloxynaphthalenes were obtained from 2-mesyloxynaphthalene by monobromination and from bromo-2-naphthol by mesylation. 1 table; 33 references, mostly Eastern.
Terekowska, Janusz and Zalewska, Ewa; Department of Inorganic Chemistry, Pharmacy Division, Wroclaw Medical School (Katedra Chemii Nieorganicznej, Wdzial Farmaceutyczny, Akademia Medyczna, Wroclaw).

"Thermodynamic Properties of Thallium-Tellurium Liquid Solutions".

Warsaw, Roczniki Chemii, Vol. 37, No 2, 63, pp 193-200

Abstract: [Authors' English summary modified] The thermodynamic properties of the liquid Tl-Te system were investigated by measuring the electromotive forces. The dependence of excess thermodynamic functions of mixing on the composition of the liquid solutions is discussed. 2 tables; 3 diagrams; 18 references, mostly Eastern.

Basionksi, Antoni; Michalina Sierocka and Danuta Pilat; Department of Physical Chemistry, N. Copernicus University (Katedra Chemii Fizycznej, Uniwersytet N. Kopernik), Torun.

"Studies on the Mechanism of Purification of Silver Halides Sols by Means of Ion-Exchangers. V. Purification of Silver Iodide Hydrosol".

Warsaw, Roczniki Chemii, Vol. 37, No 2, 63, pp 201-206.

Abstract: [Authors' English summary modified] Dynamic and static methods of purification of silver iodide hydrosol were elaborated. Silver iodide was obtained in the reaction: Hl + AgNO₃ = AgI + HNO₃, with the use of anion-exchange resins. 2 tables; 2 diagrams; 6 references, only one of them Western.
"Kinetics of Copper Sulfuration. II."

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 207-214.

Abstract: A study was made of the kinetics of sulfuration of copper in liquid sulfur in the temperature range of 300°C to 450°C, using the Wagner-Rickert pellet method. 1 table; 4 diagrams; 15 references, mostly Eastern.

"Investigations of Contacts. Part I. Contacts of Basic Character"

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 215-224.

Abstract: Investigations of the contact surface obtained by saturation of silica gel with various amounts of NaOH were carried out by applying the method of adsorption of indicators, and by titration: in an aqueous, anhydrous acetic acid or propanol medium. It was established that on the surface, beside acidic centers there exist basic centers. 5 tables; 4 diagrams; 11 references, mainly Western.
'Luminescence of Sensitizing Dyes. I. Influence of the Dye Structure on Its Luminescence'

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 225-247

Abstract: The occurrence of luminescence in cyanine dyes when sorbed on filter paper from their solution in methyl alcohol has been detected. Measurements confirm the hypothesis that a relation exists between optical sensitizing, light absorption and luminescence.
7 tables; 3 diagrams; 11 references, mainly Western

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'ECKSTEIN, Zygmunt; Krystyna ORACZ and Barbara RUDNICKA; Second Department of Organic Technology, Warsaw Politechnic (Katedra Technologii Organicznej II, Politechnika, Warszawa)

'Reactions of Benzohydrol Derivatives with 2-Nitroindandione-1,3. Part I.'

Warsaw, Roczniki Chemii, Vol 37, No 2, 63, pp 249-254

Abstract: The condensation of some benzohydrol derivatives with 2-nitroindandione-1,3 by the Vanag method is described. The benzohydrol derivatives were obtained by transforming suitable DDT derivatives to olefinic compounds, which were subsequently oxidized with CrO$_3$ in acetic acid solution to benzophenones; these were reduced with aluminum isopropanoxide to carbinol derivatives. The compounds thus synthesized were tested for their contact insectidal and acaricidal activity. No biological activity has, however, been found. 2 tables; 9 references, mostly Western
CHOJNACKA, Janina, Chair of Inorganic Chemistry (Katedra Chemii Nieorganicznej), Jagiellonian University (Uniwersytet Jagielloński) in Krakow

"Influence of pH on the Ionic Mobilities of Molybdiic Isopolyacids."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 259-272.

Abstract: [Author's English summary] The protonization constants of the molybdate ion were calculated from the mobilities measured at various pH values by the electromigration method. Of the 40 references, one (1) is Polish, eight (8) Eastern Bloc, nine (9) are German-language, and 25 from Western Bloc countries.

POLAND

BATKOWSKI, Tadeusz and PLAZEK, Edwin, Chair of Organic Chemistry (Katedra Chemii Organicznej), Polytechnical Institute (Politechnika) in Wroclaw.

"On Some 3-amino-2,6-dimethyl-pyridine and 3-amino-2,4,6-trimethyl-pyridine Reactions. II."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 273-282.

Abstract: [Authors' English summary] Sulphonamides, N-dimethyl-derivatives, nitramines, Schiff's bases, urethanes, urea, and thio urea derivatives of the pyridines in the title were obtained, and their characteristics investigated. Differences in behavior of the two bases were found in some cases. Attempts at direct substitution were not successful for either base. There are seven (7) references, of which one (1) is Polish, two (2) are German, and four (4) are composite.
TYKA, Roman and PLAZEK, Edwin, First Chair of Organic Chemistry (Katedra Chemii Organicznej I), Polytechnical Institute (Politechnika) in Wroclaw

"On Triaroylphosphides. II."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 283-291.

Abstract: [Authors' English summary] Further studies have been made on the chemical properties of triaroylphosphides. For comparison the infrared and ultraviolet spectra are presented of triaroylphosphides and tribenzoyleamide. There are two (2) references, one Polish to the authors' prior article, and one to a German publication.

PASYKTEWICZ, Stanislaw, DAHLIG, Wlodzimierz, WOJNAROWSKI, Tadeusz, and RADZIWONKA, Tadeusz, First of Organic Technology (Katedra Technologii Organicznej I), Polytechnical Institute (Politechnika) in Warsaw.

"Reactions of Organoaluminum Compounds. II. Synthesis of Ketones From Acid Chlorides and Methylaluminum Dichloride."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 293-300.

Abstract: [Authors' English summary] Investigations of the reaction of aromatic acid chlorides with methylaluminum dichloride revealed that, depending on the density of the charge on the C-atom of the carbonyl group, the reaction runs in two different directions, resulting in a) ketones with the organoaluminum compound methyl group, and b) solvent acylation. The mechanism of the reaction is discussed. There are eight (8) references, of which three (3) each are Polish and English, and one (1) each are German and Czechoslovakian.
PIKOS, Ryszard, Chair of Inorganic and Analytical Chemistry (Katedra Chemii Nieorganicznej i Analitycznej), Medical Academy (Akademia Medyczna) and the Chair of Inorganic Chemistry (Katedra Chemii Nieorganicznej) of the Technical Institute (Politechnika), both in Gdansk

"The Action of Sodium on Ethoxychlorosilanes."


Abstract: [English article, author's English summary] A study of the interaction between ethoxychlorosilanes, SiCl,
ethoxypolysiloxane, and sodium revealed that the reactions took substantially the same course as in the case of the previously studied bromo-derivatives. Of the 24 references, one (1) is Polish, three (3) Russian, four (4) German, and the rest Western.

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POLAND

GOLANKIEWICZ, Krzysztof, Chair of Organic Chemistry (Katedra Chemii Organicznej), University (Uniwersytet) im. A. Mickiewicza in Poznan

"Curtius Rearrangement of (Quinolyl-4 and 2)-hydroxyliminopropionic Acids."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 309-310.

Abstract: [Author's English summary] The Curtius rearrangement of (quinolyl-4 and 2)-hydroxyliminopropionic acide was investigated. Its azide appears to be a very active compound and several products of its rearrangement have been obtained. Of the eight (8) references, one (1) is Polish, one (1) is composite, and three (3) each are in German and in English.
ACHMATOWICZ, Osman and ACHMATOWICZ, Osman, Jr., Chair of Organik Chemistry (Katedra Chemii Organicznej), University (Uniwersytet) in Warsaw, and the Institute of Organic Synthesis (Zakład Syntez Organicznej), PAN [Polska Akademia Nauk, Polish Academy of Sciences] in Warsaw.

"Monocyclic Syntheses. II. The Mechanism of Ethyl Azodicarboxylate Condensation with Olefins."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 317-331.

Abstract: [Authors' English summary] On the strength of ozonolysis and nuclear magnetic resonance measurements, the addition of olefins to ethyl azodicarboxylate has been found to proceed with a shifting of the double bond and to involve the mechanism of monocyclic condensation. Of the six (6) references, one is Polish, one is English, and four (4) are German.

POLAND

WCGZALKOWSKA, Wanda and DRAPAŁA, Tadeusz, Chair of General Chemistry (Katedra Chemii Ogólnej), Higher School of Rural Economy (Wyższa Szkoła Gospodarstwa Wiejskiego) in Warsaw

"Comparative Potentiometric Method for Determining Water-soluble Monobasic Acid Ionization Constants."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63, pp 333-340.

Abstract: [Authors' English summary] A comparative method based on potentiometric titration is proposed for determination of the acid ionization constant. It is shown that the values obtained are in good agreement with the thermodynamical data listed in the literature. There are 17 references, of which one (1) is German, and the others English.
POLAND

LATOWSKI, Tadeusz and BASINSKI, Antoni, Chair of Physical Chemistry (Katedra Chemii Fizycznej), Higher School of Education (Wyzsza Szkoła Pedagogiczna) in Gdańsk and the Chair of Physical Chemistry (Katedra Chemii Fizycznej) of the University (Uniwersytet) im. Mikolaja Kopernika in Torun.

"On the Photochemical Properties of Halogenous Aniline Derivatives. II. Quantum Yields of the Photolysis Reaction of Iodo- and Bromoderivatives of Aniline in a Methyl Alcohol Solution."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63*, pp 341-346.

Abstract: [Authors' English summary] The quantum yields of the process of photochemicalunlinking of iodine and bromine from the benzene ring have been investigated for several halogenous aniline derivatives in a methyl alcohol solution, and findings reported. There are 11 references, of which three (3) are Polish, and four (4) each in German and English.

POLAND

LESIATK, Tadeusz, Chair of Organic Chemistry (Katedra Chemii Organicznej) of the University (Uniwersytet) im. Mikolaja Kopernika in Torun.

"On Catalytic Air Oxidation of Indole to Indole."

Warsaw, Roczniki Chemii, Vol 37, No 3, 63*, pp 347-351.

Abstract: [Author's English summary modified] Procedure is described for investigation of air oxidation of indole into indole and some isatin in the presence of heretofore uninvestigated catalysts. Optimum results were obtained at 70°C with CuO as the catalyst. Two simple methods for the qualitative detection of indole are proposed as a consequence. There are seven (7) references, of which two (2) are Polish, three (3) Western, and one each German and composite.

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