

P/016/62/000/002/001/001
D204/D301

AUTHOR: Piękoś, Ryszard, Master of Engineering, Senior Assistant

TITLE: Practical utilization of ethyl silicate

PERIODICAL: Wiadomośc: chemiczne, no. 2, 1962, 97-113

TEXT: This is a review of the industrial applications of $(EtO)_4Si$, based largely on Western works, stressing particularly the latest achievements in this field. The article is aimed at showing the advantages gained by using this compound. The manufacture of ethyl silicate and its hydrolysis and condensation reactions are briefly described and properties of pure and commercial varieties of $(EtO)_4Si$ are tabulated. Methods of purification are mentioned. Applications in the following fields are discussed

(1) Plastics industry, where ethyl silicate and its condensation products improve the physical and chemical properties of the polymers and adhesives. (2) Metallurgy, in heat resistant coatings and paints, refractories, casting and welding, also as a bonding agent. (3) Impregnation of ceramics with solutions of the silicate which on firing transforms into silica.

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Practical utilization ...

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and Analytical Chemistry Section of the Pharmaceutical Department of the
Gdansk Medical Academy)

SUBMITTED April 27, 1961

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2209, 1573, 1407

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D234/D303

AUTHOR: Piękoś, Ryszard, Master of Engineering, Senior Assistant

TITLE: Organoxyhalogenosilanes

PERIODICAL: Wiadomości chemiczne, no. 5, 1961, 313 - 346

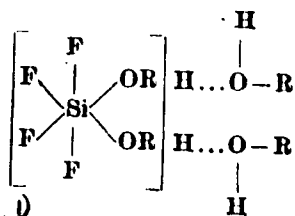
TEXT: This is a comprehensive review of the preparation and properties of compounds represented by $(RO)_n SiX_{4-n}$, where R is alkyl or aryl, X is a halogen and $n = 1, 2, \text{ or } 3$. The compounds are potential starting materials in the production of polymers and have properties intermediate between the full esters $(RO)_4Si$ and SiX_4 . The future development of this branch of chemistry is also indicated. The author first examines alkoxyfluorosilanes. Reaction of SiF_4 with ethanol yields $(EtO)_4Si$. Lower aliphatic alcohols absorb $\sim 1/4$ mole SiF_4 per mole of alcohol, forming unstable addition

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compounds for which the structure



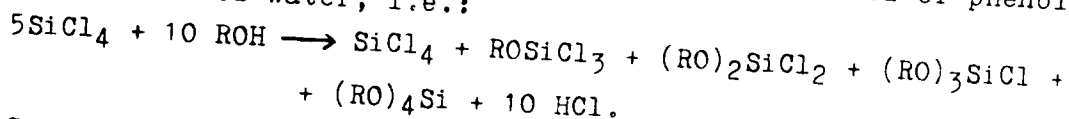
has been suggested by A.V. Topchiyev and N.P. Bogemolova (Ref. 6: DAN SSSR (DAS USSR), 1953, 88, 487). In 1946 ethoxyfluorosilanes were prepared by reacting $(\text{EtO})_4\text{Si}$ with a fluoride of a metal capable of alkoxylation. The reaction was promoted by SbCl_5 . Ethoxytrifluorosilane could not be prepared by this method, nor by heating EtOSiCl_3 with NaF . Tri-*n*-butoxy- and tri-allyloxyfluorosilanes were made by heating the ethoxy-compound with butyl and allyl alco-

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hols. Tetra-allyloxysilane did not react with SbF_3 , $SbF_3/SbCl_5$, $AlCl_3$, $ZnCl_2$, tri-allyloxychlorosilane, benzoyl fluoride or benzoyl fluoride/ $SbCl_5$. Fluoroesters may also be obtained by the esterification of $SiCl_4-nF_n$, where only the chlorines are replaced. Organoxychlorosilanes are then examined. The most general method consists of reacting an excess of $SiCl_4$ with alcohol or phenol in the absence of water, i.e.:



Cooling and removal of HCl are necessary to avoid undesirable side reactions. Studies of this process by many authors are described. N. Kalinin (Ref. 13: DAN SSSR (DAS USSR) 1940, 26, 365, taken from Chem. Abs. 1941, 35, 2470) recommends a 1 : 1 ratio of $SiCl_4$ and ROH in an inert solvent; the interaction of $SiCl_4$ with n-buta-

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nol was investigated by J. Fejgin, M. Tomaszewicz, and W. Zołędz-
iowski (Ref. 26: Przemysł Chem., 1955, 11, 198). Secondary and
tertiary alcohols react more readily with SiCl_4 than the primary
ones, due to their increased polarity, tending to form $(\text{RO})_4\text{Si}$ and
 HCl or SiO_2 and RCl , and yielding decreasing amounts of the corres-
ponding chloroesters. The effect of alcohol structure on the pro-
ducts is briefly discussed and illustrated with examples, showing
that tertiary alcohols do not yield chloroesters with SiCl_4 unless
an HCl acceptor, such as pyridine, is present, M.G. Voronkov, A.N.
Lazarev and A.K. Baygozhin (Ref. 32: Zhurn.Obshch.Khim., 1956, 26,
3072). Later work suggests that pyridine acts by forming a coordi-
nation compound with the $\geq \text{Si-cl}$ group. Preparation of various
chloroesters is described, eg. the work of Y.N. Volnov (Ref. 38:
Zhurn.Obshch.Khim., 1947, 17, 231). Mixed esters $(\text{RO})_m(\text{R}'\text{O})_n\text{SiCl}_{4-m-n}$
are usually prepared by adding a calculated amount of alcohol
to a chloroester in the presence of an HCl acceptor to prevent

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disproportionation. Examples of such synthesis are quoted. Phenols react with SiCl_4 less readily than aliphatic or alicyclic alcohols, but phenoxychlorosilanes may be made with the usual method on heating to $\sim 100\text{-}200^\circ\text{C}$, generally in an inert solvent. Studies of Western authors, A. Radecki and R. Piękoś (Ref. 17: Roczniki Chem., 1959, 33, 57; Chem. Abs. 1959, 53, 16084). Y.N. Volnov and B.N. Dolgov (Ref. 18: Zhurn.Obshch.Khim., 1940, 10, 550; taken from Chem. Abs., 1940, 34, 7874) and J.N. Volnov and A. Mishelevich (Ref. 14: Zhurn.Obshch.Khim., 1943, 13, 213; Chem. Abs., 1944, 38, 1484) are described to illustrate those reactions. Chloroesters may also be found by heating $(\text{RO})_4\text{Si}$ with SiCl_4 to $\sim 160^\circ\text{C}$ in a sealed tube. The reaction is discussed shortly, with the aid of the results of A.P. Kreshkov and G.D. Nessonova (Ref. 10: Zhurn.Obshch.Khim, 1949, 19, 660) and of Western authors. Chlorination of $(\text{RO})_4\text{Si}$ with acid chlorides preferably in the presence of AlCl_3 or by heating the reactants in a sealed tube, is briefly described. Reaction of

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(RO)₄Si with BCl₃ or POCl₅ yields chloroesters, chiefly (RO)₃SiCl. An advantage of the method, whereby the chlorosilanes are made by the interaction of SiCl₄ with organic esters is the absence of HCl in the products. With regard to organoxybromo and iodosilanes, little work has been carried out with regard to the preparation of bromoesters. (ter-BuO)₃SiBr was made by refluxing SiBr₄ with ter-BuONa for 5 hours. A small amount of a compound approximating to (BuO)₃SiBr was obtained from the reaction of acetyl bromide with (BuO)₄Si. [Abstractor's note: Presumably the n-butoxy derivative]. Studying the reaction of butyl bromide with (RO)₄Si, J. Frejka and I. Wiesner (Ref. 64: Chem. Listy: 1957, 51, 2369) found that (RO)₃Si-OBu and RBr were formed instead of (RO)₃SiBr and BuOR. Systematic investigations of bromo and iodoesters were begun by R. Piękoś and A. Radecki (Ref. 67: List do Redakcji Roczników Chem. (w druku) (Letter to Roczniki Chemii (in print)) in 1951, who first prepared

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phenoxybromosilanes by refluxing phenol with SiBr_4 until all HBr was removed. Alkoxyiodosilanes could not be made by this method, nor by the reaction of SiI_4 with Et_2O . Iodoesters were also not isolated from the reaction of HI on SiI_4 , where they may occur as intermediate products. A brief summary of the physical and chemical properties of organoxyhalogenosilanes is given. All alkoxyfluorosilanes hydrolyse readily in cold water forming gels, with the exception of $(\text{ter-BuO})_3\text{SiF}$, probably for steric reasons. Lack of resistance to hydrolysis is ascribed to the formation of HF which catalyses hydrolysis and disproportionation. Alcoholysis of lower fluoroesters $(\text{RO})_3\text{SiF}$ by higher alcohols $\text{R}'\text{OH}$ merely results in $(\text{R}'\text{O})_3\text{SiF} + \text{ROH}$. Disproportionation of EtOSiF_3 and $(\text{EtO})_2\text{SiF}_2$ at room temperature is briefly mentioned. Chloroesters are attacked by water less readily, owing to the weaker catalytic action of HCl . The rate of hydrolysis increases with the number of Cl atoms in the molecule, but decreases with increasing molecular weight and

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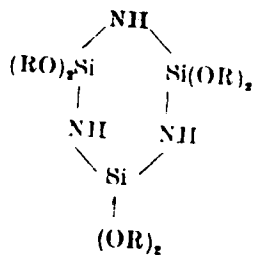
branching of the alkyl groups. In the presence of an HCl acceptor, the Cl atoms alone are attacked and alkoxy polysiloxanes are formed. A few examples are given, quoting Western authors and W. Rodziejewicz and J. Prejzner (Ref. 71: Roczniki Chem., 1957, 31, 525). Interaction of $(\text{EtO})_3\text{SiCl}$ with ZnEt_2/Na , yielding $(\text{EtO})_3\text{SiEt}$, is shortly discussed. Six ethyl and phenyl alkoxy silanes were prepared from the corresponding alkoxychlorosilanes by means of ethyl and phenyl magnesium bromides. Reactions of chloroesters with Grignard reagents are described from the extensive studies of K.A. Andryanov, S.A. Golubtsov and T.S. Maklashina (Abstractor's note; This name appears as "Malyshina" at the end of the article), and N.P. Lobusevich (Ref. 73: Zhurn.Obshch.Khim., 1957, 27, 914). Alkyl alkoxy silanes with a definite number of Si-C bonds may be synthesized by the action of Na/RCl on chlorosilanes. A short account is given of the reaction phenoxychlorosilanes with Na, yielding $(\text{C}_6\text{H}_5\text{O})_4\text{Si} + \text{Si}$. Chloroesters decompose in the presence of traces of AlCl_3 to form alkyl chlorides, alcohols, olefins, ethers, sili-

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ca and polychloropolysiloxanes $(SiOCl_2)_n$. On heating $(RO)_{4-x}SiCl_x$ to 180-200°C with $POCl_3$, in a sealed tube, $SiCl_4$ $SiP_2O_2Cl_2$ and RCl are formed. Products of ammonolysis depend on the number of chlorines in the molecule, thus $(RO)_3SiCl \rightarrow (RO)_3SiNH_2$, and $(RO)_2SiCl_2 \rightarrow (RO)_2Si(NH_2)_2$ which eliminates ammonia and cyclizes to:



No definite products were separated from the reaction of NH_3 with
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the trichloroesters. Amines behave similarly to ammonia. On heating, chloroesters disproportionate at a rate dependent on the symmetry of the silane molecule. Thus dialkoxydichlorosilanes are stable, whilst e.g. $\text{ROSiCl}_3 \rightarrow (\text{RO})_2\text{SiCl}_2 + \text{SiCl}_4$. Various examples are quoted and discussed. Thermal stability increases with increasing molecular weight and is low for the iso-alcohol derivatives. Aromatic esters are more stable than the aliphatic reaction of organoxychlorosilanes which with ROH yields the expected mixed esters if an HCl acceptor is present. Tertiary-alkoxychlorosilanes are attacked less readily than the secondary or primary compounds. A discussion of the above mechanisms is given. The C-Cl bonds in chlorosilanes are weak and susceptible to rupture by silver salts. Reactions of alkoxybromosilanes have not been described in technical literature but it is believed that the Br atoms are very reactive. Phenoxybromosilanes are more susceptible to nucleophilic attack than the corresponding chloroesters, but

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their resistance to hydrolysis increases in the same manner. The author sums up by observing the lack of information about the bromoesters. The sharp difference between the fluoro and chlorosilanes is ascribed to the difference in the strengths of the Si-F and Si-Cl bonds. Research on the reaction of SiCl_4 with organic esters, as a method of syntheses of chlorosilanes, is recommended since this is thought preferable to SiCl_4/ROH interaction. The corresponding SiBr_4 /organic ester systems will be studied by A. Radecki and R. Piękoś. There are 1 table and 93 references. 27 Soviet-bloc and 66 non-Soviet-bloc. The references to the four most recent English-language publications read as follows: A.B. Burg, J. A.C.S., 1954, 76, 2674; W. Gerrard and F.D. Kiburn, J.C.S., 1956, 1536; W. Gerrard and J.A. Strickson, Chem. and Ind., 1958, 27, 860; J.F. Hyde and J.W. Curry, J.A.C.S., 1955, 77, 3140. N

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Organoxyhalogenosilanes

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D234/D303

ASSOCIATION: Katedra chemii nieorganicznej i analitycznej wydziału farmaceutycznego Gdańskiej akademii medycznej (Department of Inorganic and Analytical Chemistry, Pharmaceutical Dept. Gdańsk Medical Academy)

SUBMITTED: June 6, 1960

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P/016/60/014/001/001/...
B103/B207

AUTHOR: Piękoś, Ryszard, Magister, Engineer, Senior Assistant
TITLE: Methods of determining silicon in organosilicon compounds
PERIODICAL: Wiadomości chemiczne, v 14, no 1 (151), 1960, 1-21

TEXT: The author gives a survey of the methods of determining the silicon content in organo-silicon compounds (SiOrg) on the basis of literature. He does not mention own studies made in this field. He discusses in detail the methods suitable for the analysis of larger SiOrg groups and differentiates as follows: 1. Methods of hydrolysis, 2. Wet oxidation, 3. Methods of combustion, 4. Melting. 5. Mineralization of the sample with a mixture of fuming HNO_3 and oleum with acidometric determination of SiO_2 (Ref. 97), as well as 6. Hydrolysis with hydrofluoric acid and titration (L. Kálmán and A. Vágó, Ref. 98). Ad 1: Simple SiOrg can be hydrolyzed with water under the addition of small amounts of acid or alkali (Refs. 14-23) apart from those reacting too vigorously with water. The latter are either hydrolyzed with water alone, or esterified in absolute ethanol and only the esters hydrolyzed with water. The Si-Si bond is ruptured by hydrolysis and hydrogen

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liberated. Aqueous and alcoholic ammonia solutions are often used as hydrolyzing agents, since in the ester decomposition no silica gel forms, which normally hampers diffusion and hydrolysis. Aqueous or alcoholic NaOH- or KOH solutions are most frequently needed. Alkoxyfluorosilanes require a special treatment (Ref 20). D. N. Andreyev (Ref. 22) recommended a simple method of determining easily hydrolyzable SiOrg. It bases on the formation of nonvolatile alkyl polysiloxanes with reticular structure if hydrolysis is carried out in two stages. Ad 2: Oxidizing acids, above all H_2SO_4 or HNO_3 or their mixtures, in concentrated or dilute state, also under the addition of permanganate decompose several SiOrg. Mercury serves as catalyst (Ref. 38). This method is particularly suited for polymers. M. G. Voronkov and Y. Y. Khudobin (Ref. 56) used successfully a mixture of fuming HNO_3 and oleum for oxidation. M. G. Voronkov, N. G. Romanova, and L. G. Smirnova (Ref. 61) hydrolyzed the weighed portion in 90% ethanol with dilute HCl. The oxidizing effect of perchloric acid is rapid and profound (Ref. 64). A. P. Kreshkov and G. D. Nessonova (Ref. 67) used H_2SO_4 with KI or concen-

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trated H_2SO_4 with concentrated H_3PO_4 , chromic acid and KI. Y. Y. Guretskiy (Ref. 62) used bromium in HNO_3 medium as oxidizer. Ad 3: SiOrg are burned in oxygen current to avoid the formation of silicon carbide (Ref. 71). Each individual polymer, however, requires a different optimum combustion temperature. This method was further improved by V. A. Klimova, M. O. Korshun, and Yu. G. Bereznitskaya (Ref. 77). They recommended a pyrolytical decomposition of the sample almost without oxygen addition at 850-900°C. Subsequently, the pyrolysis products are burned at 900-950°C with a great oxygen excess. This method is quick, however, not applicable to all SiOrg. A further improvement was suggested for volatile and easily decomposable SiOrg (Ref. 80). They are introduced into the combustion area in dry nitrogen current. Ad 4: SiOrg are molten together with oxidizers (soda, $NaOH$, N_2C_2 , nitrates). The methods shown are the ones most generally applied. The melt dissolved in water is analyzed for silicon by titration, colorimetry, or gravimetry. On the basis of the above survey the author states that hitherto no method has been developed which is applicable to the analysis of all types of SiOrg. This is mainly due to the widely differing chemical character of the individual groups of these substances. The lack of a rapid and

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accurate method of analyzing many volatile compounds and fluorosilanes is seriously felt. The author regards the decomposition by means of concentrated H_2SO_4 or by means of its mixture with other oxidizing acids to be the best method⁴ for the great number of simple SiOrg. Moreover, this method requires a much less complex apparatus. The method of melting together seems to be good as well. The author stresses also the importance of the methods permitting a simultaneous determination of several elements from one weighed portion and finds that the present development of the chemistry of SiOrg requires a quick method of determining silicon, rendering possible to follow the course of a reaction or a technological process. The following papers are mentioned: K. A. Andrianov (Ref. 40), V. Bažant, V. Chwalowský, and J. Rathouský (Ref. 43), B. Y. Yakovlev (Ref. 55), M. Y. Volynets (Ref. 93), Y. A. Peregud, and N. P. Kozlova (Ref. 89). There are 99 references: 31 Soviet-bloc and 29 non-Soviet-bloc. ✓

ASSOCIATION: Katedra Chemii Nieorganicznej i Analitycznej Wydziału Farmaceutycznego Gdańskiej Akademii Medycznej (Department of Inorganic and Analytical Chemistry of the Pharmaceutical Division of the Gdańsk Medical Academy)

SUBMITTED:

June 12, 1959

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PIEKOS, Myszan, et al.

Aluminum piccolates. Pt.1. Wlad chem 18 no.13-18
Ja '65.

I Department of Inorganic Chemistry of the School of
Medicine, Gdansk. Submitted October 6, 1964.

RADECKI, Aleksander; PIEKOS, Ryszard

Synthesis and investigations of organoxybromosilanes. I. Phenoxybromosilanes. *Rocz chemii* 35 no.4:869-878 '61.

1. Department of Inorganic and Analytical Chemistry, Faculty of Pharmacy, Medical Academy, Gdansk.

PIEKOS, Ryszard, mgr., inż., st. asystent

Method for the determination of silicon in organic silicon compounds. Wiad chem 14 no.1:1-21 Ja '60.

1. Katedra Chemii Nieorganicznej i Analitycznej, Wydział Farmaceutyczny, Gdanska Akademia Medyczna, Gdansk.

PIEKOS, Ryszard

Progress in the field of applying silicones in pharmacy.
Farmacja Pol 16 no.17:349-351. S '61.

1. Katedra Chemii Nieorganicznej i Analitycznej, Wydział Farmaceutyczny, Akademia Medyczna, Gdansk Kierownik: Doc. mgr. inż. Stanisław Ostrowski.

COUNTRY : Poland G-3
CATEGORY :
ABS. JOUR. : RZKhim., No. 5 1960, No. 17922
AUTHOR : Radecki, A. and Piekos, R.
INST. : Not given
TITLE : Naphthoxychlorosilanes.
ORIG. PUB. : Roczniki Chem, 33, No 1, 57-63 (1959)
ABSTRACT : The preparation of $(\alpha\text{-C}_{10}\text{H}_7\text{O})_n\text{SiCl}_n$ (I) ($n = 1, 2, \text{ and } 3$) by the action of SiCl_4 on ether solutions of naphthol (II) is described. The reaction of α -II with SiCl_4 gives the following I ($n = 1$) depending on the mol ratio of the reagent used (the yield in %, bp in $^\circ\text{C}/\text{mm}$, mp in $^\circ\text{C}$, and d_4^{20} are given): 45, 242-245/260, -, 1.3588; $n = 2$: 20.5, 355-357/260, 51-53; $n = 3$, 21, 405-410/130, 96-98, -. Similarly the reaction with β -II gives the following $(2\text{-C}_{10}\text{H}_7\text{O})_n\text{SiCl}_n$ (II): $n = 1, -, 2, 3$

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PIEKÓŚ, Ryszard

SURNAME (in caps); Given Names

Country: Poland

Academic Degrees:

Affiliation: Department of Inorganic and Analytical Chemistry, Faculty of
Pharmacy, Medical Academy, Gdańsk, Poland.

Source: Berlin, Zeitschrift fuer anorganische und allgemeine Chemie, No. 6-6
April 1961, pp 258-265.

Data: "The Action of Sodium on Phenoxybromosilanes".

Co-author:

RADECKI, Aleksander, Department of Inorganic and Analytical Chemistry,
Faculty of Pharmacy, Medical Academy, Gdańsk.

PIEKOS, Ryszard; RADECKI, Aleksander

On inapplicability of Kreshkov and Nessonova method for determination of carbon in silicon organic compounds containing chlorine. Chem anal 5 no.1:125-128 '60. (EEAI 9:11)

1. Katedra Chemii Nieorganicznej Wydziału Farmaceutycznego Akademii Medycznej, Gdansk.
(Carbon) (Silicon) (Chlorine) (Organic compounds)

PIEKUS, J.; RUDCZYK, J.

Naphthoxychlorosilanes. p.57.

RODZNIKI S. W. II. Warszawa, Poland. Vol. 21, no. 1, 1972.

Monthly List of East European Accessions (FEA), D. Vol. ", No. 2, September 1972
Encl.

ACCESSION NR: AP4026206

P/0047/G4/025/001/0031/0045

AUTHOR: Czachor, Andrzej; Piekoszewski, Jerzy

TITLE: Recombination of current carriers in semiconductors

SOURCE: Postepy fizyki, v. 15, no. 1, 1964, 31-45

TOPIC TAGS: current carrier recombination, semiconductor, valence zone, conduction zone, forbidden zone, energy exchange, capture of carrier, surplus carrier, kinetics equation, ionized admixture

ABSTRACT: The recombination of electron and hole, i.e. the passage of an electron from the conductivity zone to the valence zone in a zonal semiconductor model, may take place either directly, or via local levels (connected with recombination centers) in the forbidden interval. The article deals with the second kind of passage, as dominant in conductors with a broad forbidden interval, hence the most general in the transistor materials now employed. Recombination via local levels has two basic aspects: 1) the mechanism of energy exchange and speed in the recombination action and the cross-sections active in the capture of current car-

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ACCESSION NR: AP4026286

riers by the recombination center; 2) the statistical aspect of recombination. The difficulty of determining the energy balance in recombination via local levels has thus far prevented a unified theory explaining the qualitative behavior of cross-sections active in the capture of carriers by the center under various physical conditions. The paper treats the cross-sections in question as established parameters, and considers the statistics of recombination in the contents of the semiconductor, which reveal the relations between the lives of the surplus carriers and such magnitudes as: equivalent concentrations of holes and electrons, concentrations of recombination centers, numbers and positions of local levels in the forbidden interval, concentration of surplus carriers, etc. The review obviously does not embrace all possible cases, but is intended "To acquaint the reader in general with the present methodology of research into the effect of the imperfection of the crystal structure of a semiconductor on the life of carriers." The author formulates kinetics equations for the electron--hole recombination process via local levels connected with recombination centers only, not ionized admixtures (donors, acceptors) or traps. Ionized admixtures can be disregarded as a carrier caught on an admixture level is re-emitted into the zone before the capture of a carrier of opposite sign, and its stay at the local level is short in comparison

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ACCESSION NR: AP4026286

with the average life in the zone. The role and action of trap levels, so important for recombination, is discussed in a separate section. The mechanism of recombination via recombination levels is based on the nearly simultaneous transition of an electron from the conductivity zone and the transition of the hole from the basic zone to this level. There are separate sections on one-level recombination, multi-level recombination, traps, and experimental methods of determining recombination parameters. Orig. art. has: 5 figures, 22 formulas.

ASSOCIATION: Instytut Badan Jadrowych, Warsaw (Nuclear Research Institute)

SUBMITTED: 00

DATE ACQ: 15Apr64

ENCL: 00

SUB CODE: GE, NC

NO REF SOV: 005

OTHER: 022

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1/056/63/001/001/001/001
A160/A101

AUTHORS: Piekoszewski, Jerzy, Usachov, Andrzej

TITLE: Radiation defects in germanium (irradiated by fast neutrons in a reactor) as centers of recombination and capture of carriers

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1963, 88, abstract 23587 ("Rept. Inst. badań jądrow. PAN", no. 316/I-B, 1962, 11 pp., illust., English; summaries in Polish and Russian)

TEXT: Investigated were the recombination effects in n-Ge irradiated by fast neutrons. The investigated effects are connected with an increase of the life time of the carriers when decreasing the temperature in the region of low temperatures and increasing the temperature in the region of high temperatures (see Referativnyy zhurnal, Fizika, 1962, 4B449). An interpretation was carried out of the experimental results on the basis of a model of multiply charged centers yielding two levels in the forbidden zone.

[Abstracter's note: Complete translation.]

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3/058/63/000/002/056/070
A160/A1C1

AUTHORS: Chroboczek, Jan, Czachor, Andrzej, Piekoszewski, Jerzy

TITLE: The effect of the chemical treatment and neutron irradiation on the surface recombination rate of the carriers in n-type germanium

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1963, 88, abstract 2E59C ("Rept. Inst. badań jądrow. PAN", no. 219/I-B, 1962, 19 pp., illust., English; summaries in Polish and Russian)

TEXT: An investigation was carried out of the possibility of using the photomagnetic-electric effect for measuring the rate of the surface recombination of S in n-Ge. It is shown that the effect of a foregoing surface treatment on the magnitude of S is comparatively small in case of a careful chemical surface treatment. A few values of S for various etchants are presented. It was established that a change of S (observed by other authors) due to irradiation of the samples by neutrons, is not connected with an increase of the concentration of the surface recombination centers.

[Abstracter's note: Complete translation]

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PERKINS, J.

Static and dynamic bearing coefficients. . . 27.

RESEARCH. 1957 Y. 22. 12. (Kozl. és az esztendő esztendőjei) (1957)
Budapest, Hungary. Vol. 9, no. 12, Dec. 1957.

Monthly List of East European Acquisitions. (Part D, Vol. 1, no. 1,
Feb. 1957) Incl.

BARTNIK, Tadeusz; PIEKUTOWSKA, Barbara; CUCHRA, Alicja

Determination of health situation and of health work in the village.
Cesk. zdravot. 5 no.3:185-193 Mar 57.

1. Prace studentskeho vedeckeho krousku pri katedre organizace
zdravotnictvi (vedouci katedry lekarske akademie ve Varsove Doc.
Dr. J. Krupinski).

(RURAL CONDITIONS,
pub. health in Poland (Pol))

KRUPINSKI, Jerzy; BIELECKI, Jan; EYCHNER, Wiktor; PIEKUTOWSKA, Barbara;
WOJTASZEWSKA, Krystyna

The appearance of coronary disease in Poland in the light of diseases
of the circulatory system. Postepy hig. med. dosw. 15 no.6:641-676
'61.

1. Z Katedry Organizacji Ochrony Zdrowia AM w Warszawie Kierownik:
doc. dr. J. Krupinski.

(CORONARY DISEASES statist)
(CARDIOVASCULAR DISEASES statist)

PIEKUTOWSKA, E.

Chem Hydroxyl value of linseed oil polymerized to a different degree. M. Tullwaki and E. Piekutowski. *Przemysl Chem.* 9, 012-13 (1931) (Russian summary). Hydroxyl value of linseed oils polymerized to a different degree increases with the increase of viscosity at any one temp. and decreases with the increase in polymerization temp. at const. viscosity. The color of the polymerized oil is darker, the higher the polymerization temp. Gene A. Wozny 2

PIEKUTOWSKA, E.

Taniewski, M.; Piekutowska, E.

"Hydroxylic value of polymerized linseed oil", p. 612 (Przemysl Chemiczny, Vol. 9,
no. 12, Dec. 1953, Warszawa)

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

Piekutowska, E.

3971

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Tantowski M., Piekutowska E. The Hydroxyl Values of Polymerized Linseed Oils.

"Leczy hydroksylowe zagezmozonych olejow linianych". Przemysl Chemiczny, No. 12, 1953, pp. 613-617, 3 tabs.

A modified pyridine method advanced by the "International Commission of Fats Investigation" was used for determination of the hydroxyl values of flax oils polymerized in different degrees, with a view to establishing the properties of these oils and to finding a proper method of oil polymerization. It was ascertained that: 1) the hydroxyl value of oils, polymerized in air at the same temperature, rises with the increase in viscosity; 2) the hydroxyl values of oils of approximately the same viscosity are inverse proportionate to their polymerization temperatures; 3) the removal of proteins from linseed oil has no effect on the hydroxyl values; 4) the higher the temperature of polymerization, the darker is the colour of the concentrated oil; 5) the colour of the linseed oil polymerized in an air atmosphere at 100°C, is lighter than that of the oil at the beginning of the process; 6) the hydroxyl values of linseed oil, polymerized without air flow, remain the same as those of the initial oil.

PIEKUTOWSKI, J.

Export of complete industrial plants. p.129

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Warszawa. Poland
Vol.18, no.5, Mar. 1959

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Uncl.

PIEKUTOWSKI, Z.

"The Initial Cleaning of Gas in Open-Hearth Furnaces" p. 7 (Wiadomosci Hutnicze,
Vol. 9, No. 4, April, 1953, Stalinogrod)

SO: Monthly List of East European Acquisitions, Vol. 3, No. 2, Library of Congress,
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PIEKUTOWSKI, Z.

A description of the automatic regulation of boilers; experiences in a factory. p. 27, (GOSPODARKA CIEPLNA. ENERGETYKA PRZEMYSŁOWA, Vol. 1, No. 6, Dec. 1953, Warszawa, Poland)

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

JASSEM, W.; PIELA, B.; STEFFEN, M.

Average spectra of Polish speech. Proceed vibr probl no.2:59-
71 '59.

1. Department of Vibrations, Institute of Basic Technical Problems,
Polish Academy of Sciences, Warsaw and Phonographic Institute,
Department of General Linguistics, Adam Mickiewicz University,
Poznan.

PIELA, Boleslaw, inż.

The medium speech spectrum and the voice volume. Przegl telekom
34 no.8:245-248 Ag '62.

1. Zaklad Fonograficzny, Uniwersytet Adama Mickiewicza, Poznan.

PIELA, Romualda, mgr

Syllable articulation depending on the cut-off frequency of low- and high-pass filters. Przegl telekom 36 [i.e. 37] no.2:52-54 F '64.

1. Instytut Podstawowych Problemow Techniki, Polska Akademia Nauk, Warszawa.

DUKIEWICZ, Leokadia; PIELA, Romualda

Articulation and discrimination of letters of the Polish language depending on the higher limit of frequency. Przegł telekom 34 no.7:213-217 JI '62.

1. Pracownia Fonetyki Akustycznej, Instytut Podstawowych Problemow Techniki, Polska Akademia Nauk, Warszawa.

PIELA, W.; POBLODZA, T.; WINCZAKIEWICZ, A.

A contribution on the determination of B- and Y-cellulose in rayon-cellulose pulps. p. 693.

CHEMIA ANALITYCZNA. (Komisja Analityczna Polskiej Akademii Nauk i naczelna Organizacja Techniczna) Warszawa, Poland, Vol. 3, no. 3/4 1958.

Monthly List of East European Accessions (MEAL) LC, Vol. 8, no. 7, July 1959.

Uncl.

PIELA, W.

COUNTRY : Poland
CATEGORY : H-33
ABS. JOUR. : RZKhim., 16. 20 1959, No. 73457
AUTHOR : Pielia, W.; Iodglocek, T.; Winczariewicz, A.
INST. :
TITLE : Determination of Beta- and Gamma-Cellulose
in Cellulose Intended for Synthetic Fiber
ORIG. PUB. : Chem. analit., 1958, 3, No 3-4, 693-697

ABSTRACT : A comparison is made of four methods of determination of beta- and gamma-cellulose: the classical method of Cross-bevan, Swedish Standard CCA-10-1941, the Czech Standard CSN-50-0161-1955, and the Swedish modified method. Advantages and disadvantages of these methods are noted. The Swedish method, which has its advantages, is recommended for quality control of cellulose intended for synthetic fiber. The experiments were conducted with three different specimens of cellulose having different analytic characteristics.

CARD: 1

PIELACINSKI, Mieczyslaw

Multivoltage electric heating of 7 A cars of the Polish State
Railroads with automatic temperature control. Przegl kolej
mechan 14 no.11:333-338 N '62.

PIELACINSKI, Mieczyslaw

Multivoltage electric heating of the passenger cars of the French National Railways. Przegl kolej mechan 10 [i.e.15] no.10:293-296 0 '63.

1. Central Railway Car Administration, Warsaw.

PIELACINSKI, Mieczslaw, inz.

Electric heating of railroad cars. Przegl kolej mechan 13
no.9:274-278 S '61.

PIELACINSKI, Mieczyslaw, mgr inż.

Electric-water heating of restaurant cars. Przegł kolej mechan
13 no.10:318-319 0 '61.

PIELACINSKI, Mieczyslaw; DOMANSKI, Wiktor

Prototype equipment for multivoltage electric heating of
passenger cars. Przegl kolej mechan 14 no.6:175-178 Je '62.

1. Centralny Zarzad Wagonow, Warszawa.

GACA, Witold, dr inz.; PIELAK, Konstanty

On certain construction errors in hydroengineering. Tech gosp
morska 12 no.9:268-270 S '62.

1. Politechnika, Gdansk (for Gaca). 2. Stacja Morska, Polska Akade-
mia Nauk, Sopot (for Pielak).

PIELAK, Zdzislaw, mgr

The work day of a graduate engineer. Przegl techn 84 no.40:5
6 0 '63.

PIELAS, C.

PIELAS, C. Operating plan of servicing railroad sidings and loading points. p. 404

Vol. 8, no. 11, Nov. 1956

PRZEGLAD KOLEJOWY

TECHNOLOGY

Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, 1957

PIELAS, G.; CHMIELEWSKI, J.

Development of science and organization of railroad traffic in
the USSR and on Polish state Railroads. p. 404. PRZEGLAD POLSKO-
JOWY (Wydawnictwa Komunikacyjne) Warszawa. Vol. 6, no. 11, Nov.
1954.

SOURCE: East European Accessions List, (EEAL), Library of Congress,
Vol. 4, no. 12, December 1955

ACC NR: AP6031705 (N) SOURCE CODE: PO/0099/66/040/003/0495/0498

AUTHOR: Polaczek, Jerzy; Pielichowski, Jan 26

ORG: Institute of Heavy Organic Synthesis, Blachownia Slaska (Instytut Ciezkiej Syntezy Organicznej) E

TITLE: Bromination of 9-vinylcarbazole with a bromate - bromide solution

SOURCE: Roczniki chemii-annales societatis chimicae polonorum, v. 40, no. 3, 1966, 495-498

TOPIC TAGS: bromination, vinyl compound

ABSTRACT: It was found that the bromine number of 9-vinylcarbazole determined by the bromate-bromide solution bromination method is three times as high as the theoretical value assuming that bromine adds to the vinyl group. This bromination reaction in the dark is one of substitution rather than addition. Orig. art. has: 2 figures and 3 tables. [Orig. art. in German] [JPRS: 36,002]

SUB CODE: 07 / SUBM DATE: 01Feb65 / ORIG REF: 002 / SOV REF: 002
OTH REF: 004

Card 1/1 2719 0305

PIELINSKI, Marian

Posterior dislocation of the shoulder. Chir. nars. ruchu 21
no.1:65-67 1956.

1. Z Oddziału Urazowo-Ortopedycznego Instytutu Doskonalenia
i Specjalizacji Kadr Lekarskich w Warszawie Szpital Nr 4,
Kierownik: prof. dr. St. Lukasik, Waresawa, ul. Radsyminska
56 m. 3.

(SHOULDER, disloc.
posterior. (Pol))
(DISLOCATIONS,
shoulder, posterior. (Pol))

LUKASIK, Stefan; PIELINSKI, Marian

Post-traumatic stump, prosthetic results. Chir. narz. ruchu ortop.
polska 26 no.6:801-806 '61.

1. Z Kliniki Chirurgii Urazowo-Ortopedycznej SDL w Warszawie Kierownik:
prof. dr S. Lukasik.
(ARTIFICIAL LIMB)

112-51 J.

POLAND/Plant Diseases - Diseases of Cultivated Plants.

0

Abs Jour : Ref Zhur Biol., No 1, 1959, 1980

Author : Pielka, J.

Inst

Title : Septoria Infections in Wheat

Orig Pub : Hodowla rosl., aklimat. i nasienn., 1957, 1, No 5-6,
745-756

Abstract : In 1956 in the Krokow environment *Leptosphaeria nodorum*
(conidial stage of *Septoria nodorum*) was observed in
winter wheat. The ears, in particular, were strongly
affected, and the weight of the ear kernels decreased
46%.

Card 1/1

ANISIMOWICZ, Zofia; PIELOWSKA, Elzbieta; SZAWLOWSKI, Kazimierz; ZDANOWICZ,
Zygmunt

Effect of somatotropin on the recovery of muscles in paresis and atrophy
in poliomyelitis. Chir. narzad. ruchu ortop. pol. 27 no.4:511-516 '62.

1. Z Sanatorium Rehabilitacyjnego dla dzieci po H.M. w Gdansk
Dyrektor: dr Z. Anisimowicz.
(POLIOMYELITIS) (SOMATOTROPIN)

BROKAMAN, Henryk; PIKOWSKA, Elzbieta; DZIEWICKA, Antonina. (Warszawa
Dzialdowska 175)

Acute peptic and clinical ulcers and their clinical importance.
Pediat.polska 30 no.2:119-126 Feb '55.

1. Z Kliniki Chorob Dzieciecych A.M. w Gdansk i z Kliniki
Terapii Chorob Dzieci A.M. w Warszawie, Kierownik: prof. dr.
med. H. Brokman.

(PEPTIC ULCER, in infant and child
clin.aspects)

ANISIMOWICZ, Zofia; GALUSZKO, Paweł; PIKULOWSKA, Elzbieta; SZAWLOWSKI,
Kazimierz

Neuroses in children after Heine-Medin disease. Neurol., neurochir.,
psychiat. Pol. 14 no.4:59-604 J1-Ag '64

1. Z Kliniki Chorob Psychiczych Akademii Medycznej w Gdansk
(Kierownik: prof. dr. T. Bilikiewicz) i z Sanatorium Rehabili-
tacyjnego dla dzieci po chorobie Heinego-Medina w Gdansk
(Dyrektor: dr. med. Z. Anisimowicz).

ANISIMOWICZ, Zofia; SZAWLOWSKI, Kazimierz; PIELOWSKA, Elzbieta; KOZIELECKA, Maria

Boy scout and girl scout camps and their role in the rehabilitation of handicapped children. Chir. narzad. ruchu ortop. Pol. 29 no.2: 205-210 '64.

1. Z Sanatorium Rehabilitacyjnego dla dzieci po chorobie Heinego-Medina w Gdansku (Dyrektor: dr. med. Z. Anisimowicz).

EXCERPTA MEDICA Sec 15 Vol 9/7 Chest Dis. July 56

1617. PIELAWSKI J. Klin. Chorob. Nerwowy. i A.M., Gdańsk. Wzrost i przebieg choroby w przebiegu gruźliczego zapalenia opon mózgowo-rucheniowych ze szczególnym uwzględnieniem gruźliczego zapalenia opon u dorosłych. Early diagnosis of tuberculous cerebrospinal meningitis with particular reference to tuberculous meningitis in adults. NEUROCIIBR. PSYCHIAT. POL. 1955, 5, 3 (243-252) Tables 2

100 cases of tb were observed. Forty-eight cases were treated by streptomycin, PAS or isoniazid before the 10th day of the disease and 48 responded well. Out of 52 cases treated after the 10th day of the disease only 27 responded

Rappaport - Tel-Aviv (XX, 8, 7, 15)

PIELONSKI, Jan

Methods for the registration of involuntary movements in chorea and choreo-athetosis. Polski tygod. lek. 14 no.43:1901-1904 26 Oct 59

1. (Z Kliniki Chorob Nerwowych A. M. G; kierownik Kliniki: prof. dr Z. Majewska).
(CHOREA, physiol.) (ATHETOSIS, physiol.)

MAJEWSKA, Zofia, prof. dr; LEHMANOWA, Jolanta; PIELOWSKI, Jan; JANIKOWSKI, Tadeusz; WISNIEWSKI, Henryk

Cerebral tumors in infants and little children. Neurol neurochir psych 12 no.1:7-14, Jan-F '62.

1. Kierownik Oddziału Neurologii Dziecięcej im. Janusza Korczaka, Akademia Medyczna, Gdansk (for Majewska). 2. Zakład Anatomii Patologicznej, Akademia Medyczna, Gdansk; Zakład Neuropatologii, Polska-Akademia Nauk, Oddział Gdansk (for Lehmanowa, Pielowski, Janikowski Wisniewski). Kierownik Zakładu anatomii patologicznej AM: prof. dr W. Czarnocki Kierownik Zakładu Neuropatologii PAN: prof. dr A. Kunicki.

MAJEWSKA, Zofia; LEHMANOWA, Jolanta; PIELOWSKI, Jan; JANIKOWSKI, Tadeusz;
WISNIEWSKI, Henryk

Brain neoplasms in older and newborn infants. Neurol. neurochir. psy-
chiat. pol. 12 no.1:7-14 '62.

1. Z Oddziału Neurologii Dziecięcej im. Janusza Korczaka Kierownik:
prof. dr Z. Majewska Z Zakładu Anatomii Patologicznej AM w Gdansku.
Kierownik: prof. dr W. Czarnocki Z Zakładu Neuropatologii PAN Kierownik
prof. dr A. Kunicki.

(BRAIN NEOPLASMS in inf & child)
(INFANT NEWBORN dis)

PIELONSKI, Jan; ZEBRYK, Czeslaw

A case of twofold thallium poisoning. Polski tygod. lek. 14 no.39:
1754-1756 28 Sept 59.

1. Z Oddzialu Neurologicznego Szpitala Mar. Woj.; ordynator: dr med.
L. Gruszecki).
(THALLIUM, toxicol.)

MAJEWSKA, Zofia; PIKLOWSKI, Jan

Catamnesis of children with inflammatory diseases of the nervous system. Neurologia etc. polska 4 no.1:55-60 Ja-7 '54.

1. Z Kliniki Chorob nerwowych Akademii Medycznej w Gdansk.
Kierownik: prof. dr Z.Majewska.
(NERVOUS SYSTEM, diseases,
*inflamm. dis. in child.)

HARKIEWICZ, Olgierd; PIELOWSKI, Jan

Five cases of polyneuritis in the course of sulfonamide therapy, possibly with methylsulfathiazole. Polski tygod.lek. 10 no.15:486-488 12 Apr 55.

1. Z Kliniki Chorob Nerwowych Akademii Medycznej w Gdansk: kierownik: dr Z.Majewska. Tczew, ul. Stalina 25.

(SULFONAMIDES, injurious effects,

polyneuritis, after ther.)

(POLYNEURITIS, etiology and pathogenesis)

sulfonamides ther.)

MAJEWSKA, Zofia; JANIKOWSKI, Tadeusz; PIELOWSKI, Jan

Thrombosis of the internal carotid artery in a small child. *Pediatr.*
pol. 37 no.4:415-418 Ap '62.

1. Z Oddziału Neurologii Dziecięcej im. Janusza Korczaka Kliniki
Neurologicznej AM w Gdansk Kierownik: prof. dr med. Z. Majewska.

(CEREBRAL EMBOLISM AND THROMBOSIS in inf & child)
(CAROTID ARTERIES dis)

DYBICKA, Anna; MATULEWICZ, Stanislaw; PIELOWSKI, Jan

Primary tumors of the optic fasciculus. Neur. &c. polska
6 no.2:181-190 Mar-Apr 56.

1. Z Kliniki Ocznej, z Zakladu Radiologii i z Kliniki Chorob
Nerwowych A.M. w Gdansk Kierownik: prof. dr. I. Abramowicz,
prof. dr. W. Grabowski, prof. dr. Z. Majewska, Klinika
Neurologiczna A.M. w Gdansk.

(NERVES, OPTIC, neoplasms
in child., primary (Pol))

PIELOWSKI, Jan

Early diagnosis of cerebrospinal tuberculous meningitis with special reference of tuberculous meningitis in adults. Neur. &c.polska 5 no.3:243-252 My-Je '55.

1. Z Kliniki Chorob Nerwowych A.M. w Gdansk. Kierownik: prof. dr Z. Majewska Gdansk-Wrzeszcz, ul. Debinki 7. Klinika Neurol. ogólna.

(TUBERCULOSIS, MENINGEAL, diagnosis early, in adults)

ROZLONSKI, Stanislaw; SEMIADZI, Stanislaw; ZOLYNSKI, Zdzislaw;
Kazimierz: PIKUS, Kazimierz; PIKUSKI, Zygmunt; RYSZKOWSKI,
Leslaw.

A search of the above-named persons in the files of the
Poland. The results of the search are as follows:
Kazimierz: For the year 1948, the name of the person
is: PIKUS, Kazimierz.

NOWAK, Eugeniusz; PIŁOWSKI, Zygmunt

Distribution of the *Nyctereutes procyonoides* (Gray, 1834)
in Poland in connection with its introduction and spread
in Europe. Acta theriolog 9 no.1/8:81-110 '64.

1. Institute of Ecology of the Polish Academy of Sciences.
Warszawa.

PIELOWSKI, Zygmunt

Geographic form of the bullfinch *Pyrrhula pyrrhula* (L.)
in the Kampinos National Park. *Przeegl zoolog* 7 no. 1:71-78
'63.

1. Zakald Ekologii, Polska Akademia Nauk, Warszawa.

PIENARU, Liviu, ing.

Technology studied in detail. Constr Buc lo no. 12413 28 March
1964.

1. Trustul Regional de Constructii de Lemite, Bucuresti.

ZEIDMAN, Rita, lector; RINCY, Aurora; RADU, Floricica; PIENESCU, Valeria

Tinctorial characteristics of sulfur dyestuffs produced in
Rumania. Ind text Rum 12 no.12:508-509 D'61

1. Colectiv al personalului stiintific studentesc de pe linga
catedra de Tehnologie Chimica Textila.

PIENIADZ, Wacław, mgr inż.

Synthesis conditions of some cam-slider mechanisms with two degrees of freedom in the light of the functional analysis of mechanisms; summary of doctor's dissertation. Przegl mech 21 no.21:672 N '62.

1. Katedra Obrabiarek, Politechnika, Krakow.

LITYNSKI, T.; JURKOWSKA, H.; PIENIAK, D.

Effect of fluorine on *Aspergillus niger*. Acta microb. polon
5 no.1-2:147-164 1956.

1. Z Katedry Chemii Rolnej WSR w Krakowie.
(FLUORIDES, effects,
sodium fluoride on *Aspergillus niger* (Pol))
(ASPERGILLUS, effect of drugs on,
niger, sodium fluoride (Pol))

BÜTTCHER, Z.; PIENIAZEK, E.

Instrument for testing the cooperation of cylindrical gears. Mechanik 37 no.5:280 My'64.

1. Communication Equipment Factory, Wroclaw.

PIENIAZEK, Jan; ZURAKOWSKA-ORSZAGH, Janina; CHOINSKI, Zdzislaw

Radiation grafting of polyacrylonitrile. *Polimery Wzrost*
wielk 9 no.3:94-99 Mr '64.

1. Department of Technology of Artificial Fibers, Technical
University, Lodz (for Pieniazek and Chocinski). 2. University,
Warsaw (for Zurakowska-Orszagh).

KASPRZAK, B;PIENIAZEK, J;SERAPINOWICZ, H.

Tularemia; an occupational zoonotic disease. *Med. vet.*
6 no.6:345-349 June 1950. (CML 20:1)

1. Of the Institute of Epidemiology of the Veterinary
Department of the University imienia Marie Curie-Sklodowska
in Lublin and of the Research Center for Zoonotic Diseases in
Lublin (Head—Prof. Josef Parnas, M. D.).

ZEBROWSKI, Tadeusz; PIENIAZEK, Janina; BOROWIECKA, Anna; ZAREMBA, Jaruz

Topographical differentiation of hydrazide resistance of the
tubercle bacilli. Gruslica 22 no.9:605-610 Sept 54.

1. Z Centralnego Laboratorium Panstwowego Zespolu Sanatoriow
Przeciw-gruzlicznych w Otwocku. Kierownik: dr. Tadeusz Zebrowski
(MYCOBACTERIUM TUBERCULOSIS, effect of drugs on
isoniazid resist., topographical differentiation)
(NICOTINIC ACID ISOMERS, effects
isoniazid on M. tuberc.)

ZEBROWSKI, Tadeusz; PIENIAZEK, Janina; BOROWIECKA, Anna

Phenomenon of extinction and resistance of *Mycobacterium tuberculosis* to isonicotinic acid hydrazide. *Graslica* 22 no.3:173-177 Mr '54.

1. Z Centralnego Laboratorium Panstw. Zesp. Sanat. Przeciwgrusliczych w Otwocku. Kierownik: dr med. T.Zehrowski.

(MYCOBACTERIUM TUBERCULOSIS, effect of drugs on,

*isoniazid, resist. & extinction of resist.)

(NICOTINIC ACID ISOMERS, effects,

*isoniazid, on *M. tuberc.*, resist. & extinction of resist.)

ZEBROWSKI, Tadeusz; PIENIAZEK, Janina; TROJANOWSKI, Stanislaw; BOROWIECKA, Anna

Experimental studies of anti-tuberculous effect of phthivaside. Polski tygod. lek. 12 no.36:1390-1393 2 Sept 57.

1. Z Centr. Labor. Panstw. Zesp. San.-Pwgr. w Otwocku; kier. Labor.: dr med. Tadeusz Zebrowski; dyrektor zespolu: dr W. Zajaczkowski. Adres: Otwock, ul. Reymonta 53 m. 5.

(ISONIAZID, rel. cpds.

N-(4-hydroxy-3-methoxy) benzal isonicotinic acid hydrazone, tuberculostatic eff. in vitro (Pol))

(MYCOBACTERIUM TUBERCULOSIS, eff. of drugs on same)

ZEBROWSKI, T.; PIENIAZEK, J.; PLEWIK, W.

Properties of isonicotinic acid hydrazide; resistant strains of *Mycobacterium tuberculosis* during the treatment of pulmonary tuberculosis. *Polski tygod. lek.* 8 no.10:372-374 9 Mar 1953. (GIML 24:5)

1. Of the Central Laboratory (Head--T. Zebrowski, M.D.) of the State Complex of Tuberculosis Sanatoriums (Medical Vice-Director--Docent J. Stopczyk, M.D.) in Otwock.

PIENIAZEK, J.

Repeated double resistance to streptomycin and isoniazid bacilli (toward isoniazid and streptomycin) and its practical significance. T. Zebrowski, A. Borowicka, and J. Pieniazek. *Beitr. Klin. Tuberk.* 116, 81-5 (1959). — If the treatment of pulmonary tuberculosis with streptomycin and isoniazid used coincidentally or alternately is discontinued after a single detm. of one or double resistance, then some individuals are denied adequate treatment with these agents. Such chemotherapy failures were found in 44 (80%) of 55 cases when single resistance detms. were used in judgment. To obviate such failures, treatment is recommended for more than 3 months or for at least 6-12 months.

H. J. Cooper

med 3

PARNAS, J.;STEPKOWSKI, S.;DABROWSKI, T.;PIENIAZEK, J.

Studies on *Listerella* and *Corynebacterium* in animals. Med. dozw.
mikrob., Warsz. 4 no. 3:334-336 1952. (GLML 23:3)

1. Summary of work progress presented at 11th Congress of Polish
Microbiologists held in Krakow May 1951. 2. Inblin.

KARCZEWSKI, Tadeusz; PIENIAZEK, Jan; WŁODARSKI, Gabriel

Studies on the structure of various types of viscose fibers. *Polimery
tworzą wielk 7 no.12:461-463 D '62.*

1. Instytut Włókien Sztucznych i Syntetycznych, Łódź.

ZEBROWSKI, Tadeusz; PIENIAZEK, Janina; BOROWIECKA, Anna; WOJCIK, Teresa;
JMDRUSZEK, Jerry.

Practical value of repeated determination of isoniazid resistance of the tubercle bacillus. Polski tygod.lek. 10 no.10:293-297 7 Mar 55.

1. Z Centralnego Laboratorium Panstw. Zespolu Sanatoriow Przeciw-grunzlicznych w Otwocku; kierownik Laboratorium: dr med. Tadeusz Zebrowski. Otwock, ul. Reymonta 53 m. 5.

(MYCOBACTERIUM TUBERCULOSIS, effect of drugs on, isoniazid resist., value of repeated determ.)

(NICOTINIC ACID ISOMERS, effects, isoniazid on M. tuberc., resist., value of repeated determ.)

ZEBROWSKI, Tadeusz; PIENIAZEK, Janina; BOROWIECKA, Anna

Comparative investigations on the antituberculous properties of isonicotinic acid hydrazid, sodium salts of para-aminosalicylic acid and bromine derivatives of salicylohydroxamic acid. Polski tygod.lek. 10 no.17:537-539 25 Apr 55.

1. Z Centralnego Laboratorium Panstwowego Zespolu Sanatoriow Przeciwgruzliczych w Otwocku; kierownik Laboratorium: dr med. T. Zebrowski. Otwock, Reymonta 53 m. 5.

(NICOTINIC ACID ISOMERS, ther. use,
isoniazid in tuberc., comparative evaluation)

(PARA-AMINOSALICYLIC ACID, ther. use,
tuberc., comparative evaluation)

(SALICYLIC ACID, derivatives,
m-aminosalicylic acid & salicylohydroxamic acid, ther.
of tuberc., comparative evaluation)

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(TUBERCULOSIS, therapy,
drug efficacy exam.)

(DRUGS,
antituberculous, exam. of efficacy)

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(TUBERCULOSIS, PULMONARY, therapy,
isoniazid)
(NICOTINIC ACID ISOMERS, therapeutic use,
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(TUBERCULOSIS, PULMONARY, experimental,
eff. of isoniazid, admin. every one & three days (Pol))

(ISONIAZID, effects,
on exper. pulm. tuberc., admin. every one & three days (Pol))

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(MYCOBACTERIUM TUBERCULOSIS, effect of drugs on,
streptomycin, resist. test in ther. (Pol))

(STREPTOMYCIN, effects,
on M. tuberc., resist. tests in ther. (Pol))

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K. I. C.

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(TUBERCULOSIS, PULMONARY, pathol.

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