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 F/046/60/005/011/002/018
 D249/D303

Neutron spectrum temperature ...

Then, substituting from Eq. (8)

$$a_{in}(x) = [c_1(z) 2\pi^{-1/2} \int_0^x t^{1/2} \exp[-(t + at^{-1/2})] dt + C_2(z) \cdot \exp(-xs^{-1}B) - \exp(-xz^{-1/2}) |x^{-1}| |N_T(z) + C_2(z)(z^{-1/2} - s^{-1} \cdot B)|^{-1}]^{-1} \quad (12)$$

where

$$C_1(z) = N_T'(z) |N_T(z)|^{-1} \quad C_2(z) = \sqrt{z} N_E(z); \quad B = \sqrt{\frac{E_0}{0.381}}$$

and there are two unknown temperature-dependent parameters s and z . These may be found by either a least squares process or by a cadmium ratio measurement, when

$$1 - p = [n(0) - n_{cd}(0)] [n(0)]^{-1} = N_T(z) + C_2(z) [z^{-1/2} - s^{-1} B] \quad (13)$$

where p is the inverse cadmium ratio. Thus, there are two methods of treating the experimental results. Method 1: From Eq. (13) a

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Neutron spectrum temperature ...

relation between z and s is obtained, a value of s is assumed, and the correction term for the filters

$$Q(h, z(s), s) = [\exp(-xBs^{-1}) - \exp(-xz(s)^{-1/2})] x^{-1} \quad (15)$$

where $x = \sum_0^N sh$

appearing in Eq. (12) is calculated. A value of $x(h)$ is then found from Eq. (12) and hence $s(h)$ is determined. Since the actual neutron spectrum is quasi-Maxwellian, $s(h)$ depends weakly on h and is averaged by

$$s = h_N^{-1} \cdot \sum_{i=1}^{i=N} s_i (h_i - h_{i-1}); \quad h_0 = 0 \quad (19)$$

the resulting value being used in a further iteration. 2 or 3 iterations are found to be sufficient and then

$$E_T = E_0 \cdot s_0^{-2} \quad (18)$$

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Neutron spectrum temperature ...

Method 2: The theoretical transmission function of the s and z variables is computed for different filter thicknesses, and the solution is given by the values of s and z for which

$$\delta^2 = \sum_{i=1}^N [a(h_i) - a_{th}(h_i)]^2 \quad (20)$$

is a minimum. In the experiments, the boron-glass contained 11 % by weight of B_2O_3 and the effective thicknesses of the filters were determined with the aid of a neutron crystal spectrometer. The neutron beam was collimated by a paraffin-boron channel, and the filters could be inserted between the pieces forming the collimator. A BF_3 proportional counter, shown to have 1/v efficiency, was used to detect the neutrons, and the cadmium filter was 0.6 mm thick. Measurements were made over a period of a year in various channels and with various reactor core loadings, and results bet-

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Neutron spectrum temperature ...

ween 346° and 383° K were found. The computation error of the absolute temperature was found to be $\pm 28^{\circ}$ K, due principally to the inaccuracy of the cadmium ratio measurements, but since the sensitivity of the method is $\pm 4^{\circ}$ K this cannot explain the dispersion of the results. Calculations made by Method 2 do not involve the cadmium ratio, and the estimated error is only $\pm 14^{\circ}$ K. The authors feel that the result $350 \pm 14^{\circ}$ K, given by a set of measurements for which the results of both methods of calculation are very close, can be relied upon, and this is in good agreement with measurements made with a crystal spectrometer and by a time of flight method. The authors thank D. O'Connor, D.Sc., and J. Sosnowski, M.Sc. for information on filter constants and help in the crystal spectrometer measurements, J. Topa, M.Sc. and W. Kaczmarek, M.Sc., for help in the measurements, Mrs. E. Weiss for the calculations, and K. Kowalska, M.Sc. for valuable comments on the paper. There are 3 tables, and 13 figures. X

ASSOCIATION: Institute of Nuclear Research, Warsaw. Reactor Engineering Department

SUBMITTED: July 1960

Card 8/8

ACCESSION NR: AP4005912

P/0046/63/008/009/0587/0593

AUTHOR: Rzeszot, Tadeusz; Warda, Eugeniusz

TITLE: Investigation of the influence of a scattering sample on neutron temperature distribution in the VVR-S reactor core

SOURCE: Nukleonika, v. 8, no. 9, 1963, 587-593

TOPIC TAGS: neutron scattering, VVR-S reactor, boron glass filter method, neutron temperature, cadmium ratio, thermal neutron, neutron scatterer effect, temperature distribution, neutron beam temperature

ABSTRACT: The effect of neutron scattering samples (water, graphite, and lead) on neutron temperature distribution in the reactor core has been investigated by the boron-glass filter method in a VVR-S reactor. The specimens were placed in an aluminum tube (inner diameter, 60 mm, and length, 6 m) which was passed through the reactor core (see Fig. 1 of the Enclosure). A cadmium tube, representing the first part of the collimator, was inserted in the aluminum tube and thus permitted the extraction of the neutron beam from the scatterer, which was located in the aluminum tube. The extracted beam was then

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ACCESSION NR: AP4005912

filtered by a set of six boron-glass filters of varying thickness and by one cadmium filter, and was detected by means of a proportional BF₃ counter. The results of the measurements are shown in Figs. 2, 3, and 4. In these figures the temperature of the neutron beam in °K is shown on the ordinate and the position of the scatterer in cm measured from the center of the reactor core is shown on the abscissa. The center of the reactor core was determined each time from the maximum of the distribution of the intensity of the unfiltered neutron beam along the y-axis of the aluminum tube. The measurements were performed at reactor power levels of 5—10 kW. Orig. art. has: 13 figures.

ASSOCIATION: Institute of Nuclear Research, Warsaw-Swierk

SUBMITTED: 07May63

DATE ACQ: 24Jan64

ENCL: 02

SUB CODE: NS

NO REF SOV: 000

OTHER: 002

85442

P/046/60/005/004/002/007
A222/A026

26.2242

AUTHOR: Rzeszot, Tadeusz

TITLE: Measurement of Angular Distribution of Neutron Stream¹⁹ Dispersed From
Reactor Channel

PERIODICAL: Nukleonika, 1960, Vol. 5, No. 4, pp. 191 - 194

TEXT: Horizontal angular distribution of neutrons dispersed from the first horizontal channel of "EWA" reactor was measured for reactor capacities of 50 and 200 kw respectively. A proportional BF₃ counter was used as neutron detector. The counter was placed in a shield made of a paraffin and boric acid mixture. The beam of neutrons was directed along the axis of the counter. Parameters of the amplification system were established in accordance with tests as published in the author's paper "Kanaly pomiarowe z licznikami proporcjonalnymi BF₃, Opracowanie Nr. 17 Zakładu IX IBJ" (Test channels with proportional BF₃ counters, Work No. 17 of Department IX, Nuclear Research Institute). The following electronic equipment was used in the test: 1) high-voltage supply stabilized up to 4 kv, built by ZKTR of Politechnika Warszawska (Warsaw Polytechnic); 2) pulse amplifier ZPT-00160 with a preamplifier; 3) Soviet converter PS 10000. The para-

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P/046/60/005/004/002/007
A222/A026

Measurement of Angular Distribution of Neutron Stream Dispersed From Reactor Channel

meters of the amplification system were set at; differentiation constant $0.6\mu s$, integration constant $0.1\mu s$, amplification 80 db, discrimination voltage 30 v. A proportional BF_3 counter type NUM 30W was used as detector and operated on 2,600 v. Counter and collimator were placed on a platform hinged by a vertical bolt at the outlet of the channel; the system made possible circumferential motion of the counter at a radius of 4 meters with the outlet of the channel as center, within an angle of $0 - 60^\circ$. Tests were made at every degree up to an angle of 5° and every 5° within the range of 5° to 60° . Results of the test are shown in Figure 3 and in a table. The test procedure was performed once at a reactor power of 50 kw and another time at a reactor power of 200 kw. Thus, at the power of 50 kw, 11,360, 5,848, 2,032 and 1,310 pulses per minute were recorded at the angles of 10° , 20° , 40° and 60° respectively. The respective numbers of pulses recorded at a power of 200 kw were 46,042, 23,446, 8,224 and 5,035. The number of pulses is proportional to reactor power within the angles of 10° to 60° . Below 10° the distribution is no more proportional, and below 2° the counter jammed. The conclusion drawn by the author is that angular distribution of dispersion is the

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A222/A026

Measurement of Angular Distribution of Neutron Stream Dispersed From Reactor Channel

same for both reactor powers and that the number of pulses is proportional to the reactor power. There are 3 figures and 1 table.

ASSOCIATION: Instytut Badań Jądrowych, Warszawa, Zakład Inżynierii Reaktorowej
(Institute of Nuclear Research, Warsaw, Department of Reactor Engineering)

SUBMITTED: February, 1960

X

RZESZOT, Tadeusz

Measurement of the angular neutron distribution scattered from
the channel of the reactor. Nukleonika 5 no.4:191-194 '60.

1. Instytut Badan Jadrowych, Warszawa, Zaklad Inzynierii
Reaktorowej

RZESZOT, Tadeusz; WEISS, Zbigniew

Neutron spectrum temperature measurements by means of baron-glass filters. Nukleonika 5 no.11:689-703 '60.

1. Institute of Nuclear Research, Warszawa, Reactor Engineering Department

BEK-UZAROV, Djordje N.; RZESZOT, T.K.

Numerical characteristics of the indigenous methane, studied
by a 4π proportional flow center. Bul Inst Nucl 11:277-280
'61.

1. Institute of Nuclear Sciences "Boris Kidrich," Department
of Physics, Vinca.

BOGUSZ, Waldemar; KOCHLER, Brygida; PIASTOWSKA, Elwira; RZESZOTARSKA, Alina.

Behavior of protein fractions in the blood serum in children
with bronchial asthma. Otolaryng. pol. 17 no.4:435-436 '63.

1. Z Oddziału Otolaryngologicznego PSK 4 w Katowicach (kierują-
cy: doc.dr.med. W.Kusnierczyk) i ze Szpitala Miejskiego Nr 3
dla dzieci w Katowicach (dyrektor: dr. med. S.Roszak).

POLAND

RZESZCZAK, Barbara

Dept. of General Chemistry, Gdansk Polytechnic (Katedra Chemii
Ogólnej Politechniki Gdanskiej)

Wroclaw, Wiadomosci chemiczne, No 7, July 1965, pp 532-534

"Research on racemation in the chemistry of peptides and ways
to avoid it." (doctoral thesis)

TASCHNER, E.; RZESZOTARSKA, B.; BIERNAT, J.F.; GRUDZINSKI, S.

New methods for the synthesis of monoesters of aspartic and glutamic acids. Coll Cz Chem 27 no.9:2234-2235 S 162.

1. Department of General Chemistry, Institute of Technology, Gdansk, Poland (for Taschner).

RZESZOTARSKA, B.; TASCHNER, E.; WASILEWSKI, C.

Synthesis of glycyL- α -glutamyl-alanyl- α -glutamyl-aspartic acid,
a fragment of bovine corticotropin. Coll Cz Chem 27 no.9:2238-2239
S '62.

1. Department of General Chemistry, Institute of Technology, Gdansk,
Poland (for Taschner).

RZESZOTARSKI, Waclaw; LEDOCHOWSKI, Zygmunt

Synthesis of new potential antitumor substances. Pt. 22.
Rocz chemii 37 no. 7/8:913-914 '63.

1. Pracownia Ir. 8, Zaklad Syntezy Organicznej, Polska Akademia
Nauk, Gdansk.

RZESZOTARSKI, Wacław; LEDOCHOWSKI, Zygmunt

Searching for new potentially inhibiting tumor substances. Pt.
20. Roczniki chemii 37 no. 12:1631-1663 '63.

1. Institute of Organic Synthesis, Polish Academy of Sciences.
Laboratory no. 8, Gdansk.

SAWLEWICZ, Jozef; RZESZOTARSKI, Wacław

Synthesis of hydroxyalkyl derivatives of benzimidazolthion-2.
I. Roczniki chemii 36 no.5:865-872 '62.

1. Zakład Chemii Organicznej, Akademia Medyczna, Gdansk.

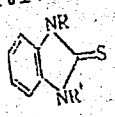
APPROVED

September 26, 2002 CIA-RDP86-00513R001446530013-4
CIA-RDP86-00513R001446530013-4

S/C81/63/000/001/040/061
B144/B186

AUTHORS: Sawlewicz, Józef, Rzeszotarski, Wacław
TITLE: Synthesis of hydroxy alkyl derivatives of benzimidazole
thione-2
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1963, 233, abstract
1Zh103 (Roczn. chem., v. 36, no. 5, 1962, 865-872
[Ger.: summaries in Pol. and Russ.]

TEXT: In an investigation of substances with thyreostatic effect, mono
and dihydroxy alkyl benzimidazole thiones-2 (I)

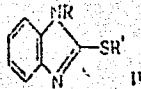


were synthesized by reaction of the corresponding N-substituted o-phenylene
diamines with $KSC(S)OC_2H_5$. Under the effect of CH_2O , I (R' = hydroxy
alkyl; R' = H) yield 3-hydroxy methyl derivatives. Benzimidazole thione-2
in enol form (II)

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Synthesis of hydroxy alkyl ...

S/OS1/63/000/001/040/061
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(R = R' = H) (IIa) reacts with ethylene oxide, forming II (R = H, R' = CH₂CH₂OH) (Iib). O-acetyl and O-benzoyl derivatives of I are obtained. The solution of 7.5 g of IIa in 150 ml alcohol is mixed with 2.2 g ethylene oxide and kept in a closed vessel for 24 hrs at 60°C, the solvent is distilled in vacuo; the residue is extracted with boiling CHCl₃; the extract is evaporated; and Iib is obtained (here and below the following data are given: the gross formula of the compounds obtained, the yield in %, and the m.p. in °C): C₉H₁₀N₂O₃S, 54, 126-127. 1 g of Iib is acetylated with 4 ml (CH₃CO)₂O in 5 ml pyridine (heated for 1 hr), and O-acetyl-Iib is obtained: C₁₃H₁₄N₂O₃S, 50, 89-90 (from CH₃OH). Benzoylation of 1 g of Iib by 3 ml C₆H₅COCl in pyridine (24 hrs, 20°C) yields O-benzoyl-Iib: C₂₃H₁₈N₂O₃S, 52, 104-106 (from CH₃OH). 3 g KOH

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S/081/63/000/001/040/061
B144/B186

Synthesis of hydroxy alkyl ...

$R' = \text{CH}_2\text{OH}$), $\text{C}_{10}\text{H}_{12}\text{N}_2\text{O}_3\text{S}$ (Ic), 91, 120-122 (decomposition; from benzene).
0.4 g of Ic, 10 ml $(\text{CH}_3\text{CO})_2\text{O}$ and 0.4 g anhydrous CH_3COONa are boiled for
30 min, poured into ice water, and di-O-acetyl-Ic is obtained:
 $\text{C}_{14}\text{H}_{16}\text{N}_2\text{O}_4\text{S}$, 60, 87-89 (from benzene-petroleum ether). Benzoylation of
Ic yields di-O-benzoyl-Ic: $\text{C}_{24}\text{H}_{20}\text{N}_2\text{O}_4\text{S}$, 59, 157.5-158.5. From 6.8 g of
o- $\text{NH}_2\text{C}_6\text{H}_4\text{NHCH}_2\text{CH}_2\text{CH}_2\text{OH}$ and $\text{KSC}(\text{S})\text{OC}_2\text{H}_5$ (boiled for 3 hrs) I is obtained
($R = \text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$, $R' = \text{H}$), $\text{C}_{10}\text{H}_{12}\text{N}_2\text{O}_3\text{S}$ (Id), 80, 165-165.5 (from water);
O-acetyl-Id: $\text{C}_{14}\text{H}_{16}\text{N}_2\text{O}_3\text{S}$, 69, 80-81 (from CH_3OH); O-benzoyl-Id:
 $\text{C}_{24}\text{H}_{20}\text{N}_2\text{O}_3\text{S}$, 65, 117-118 (from CH_3OH). 5.2 g of $\text{C}_6\text{H}_4[\text{N}(\text{CH}_2\text{CH}_2\text{CH}_2\text{OH})_2]_2$ -o
and $\text{KSC}(\text{S})\text{OC}_2\text{H}_5$ (boiled for 6 hrs) yield I ($R = R' = \text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$),
 $\text{C}_{13}\text{H}_{18}\text{N}_2\text{O}_2\text{S}$ (Ie), 40, 174-176 (from aqueous CH_3OH), (1:1); O-acetyl-Ie;
 $\text{C}_{17}\text{H}_{22}\text{N}_2\text{O}_4\text{S}$, 77, 119-120 (from CH_3OH); O-benzoyl-Ie: $\text{C}_{27}\text{H}_{26}\text{N}_2\text{O}_4\text{S}$, 78,
156-158 (from CH_3OH). 1 g of Id reacts with CH_2O (boiled for 1 hr)

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Synthesis of hydroxy alkyl ...

S/081/63/000/001/040/061
B144/B186

forming I (R = CH₂CH₂CH₂OH, R' = CH₂OH), C₁₁H₁₄N₂O₂S (If), 90, 121-123
(decomposition; from benzene); O-benzoyl-If: C₂₅H₂₂N₂O₄S, 64, 129.5-130.5
(from CH₃OH). [Abstracter's note: Complete translation.]

ACC NR: AP6031704 (N) SOURCE CODE: PO/0099/66/040/003/0493/0494

AUTHOR: Rzeszotarski, Waclaw; Ledochowski, Zygmunt (Deceased) 13

ORG: Laboratory No. 8, Organic Synthesis Institute, Polish Academy of Sciences, 13
Gdansk (Zaklad Syntezy Organicznej PAN, Pracownia Nr. 8)

TITLE: Research of tumor inhibiting compounds. XXXIII. Derivatives of
9-methylacridine. IV. Synthesis of Di-(2-chloroethyl)-9'-acridizyl methyl-sulfonium
chloride

SOURCE: Roczniki chemii-Annales societatis chimicae polonorum, v. 40, no. 3, 1966,
493-494

TOPIC TAGS: cancer drug, chemical synthesis

ABSTRACT: Di-(2-hydroxyethyl)9'-acryldimethyl-sulfonium bromide was obtained by
reacting 9-bromoethyl-acridine with thiodiglycol. This compound was transferred
into the hydrochloride salt of the chloride derivative by the action of HCl.
Reaction of the latter with thionyl chloride yielded the HCl salt of di-(2-chloroethyl)-
9'-acryldimethyl sulfonium chloride. The authors thank Doctor E. Kozlowski for
carrying out the microelementary analysis. [Orig. art. in German] [JPRS: 36,002].

SUB CODE: 07, 06 / SUBM DATE: 28Aug64 / OTH REF: OOI

Card 1/1 20

2309

RZESZOWSKA, Grazyna

Golgi's structures in the pyramidal tract of the cerebral cortex appearing under the influence of phenylethylbarbituric acid in white rats. Ann.Univ.Lublin; sec.D 14:43-49 '59.

1. Z Katedry Histologii i Embriologii Wydziału Lekarskiego Akademii Medycznej w Lublinie Kierownik: prof. dr med. Stanisław Grzycki.

(CEREBRAL CORTEX anat & histol)
(GOLGI APPARATUS pharmacol)
(PHENOBARBITAL pharmacol)

RZESZOWSKA, Grazyna

The effect of largactil and atarax on the golgi structure of big
pyramidal cells of the motor cortex of white rats. Ann. univ.
Lublin sec. D 15:38-49 '69.

1. Z Katedry i Zakladu Histologii i Embriologii Wydzialu Lekarskiego
Akademii Medycznej w Lublinie Kierownik: prof. dr med. Stanislaw
Grzycki.

(CHLORPROMAZINE pharmacol) (HYDROXYZINE pharmacol)
(GOLGI APPARATUS pharmacol) (CEREBRAL CORTEX pharmacol)

POLAND/Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi R

Abstr Jour : Ref Zhur - Biol., No 19, 1958, No 88234

Author : Broda, Boleslaw; Rzeszowski, Kazimierz

Inst : -

Title : Anti-Erysipelatous Effects of Scrophularia nodosa L. and of Caffeic Acid

Orig Pub : Acta polon. pharmac., 1957, 15, No 5, 383-384

Abstract : In folk medicine, *S. nodosa* is used in treating swine erysipelas. In the roots and subterranean rootstocks of this plant, tannic-caffeic acid, as well as cinnamic, malic, and tartaric acids were found. In order to evaluate the plant's medicinal properties, experiments were set up with some ten scores of pigeons infected by the causative agent of erysipelas. Partly intramuscularly and partly by mouth, the infected birds were given a concentrated decoction of the *S. nodosa* plant's fresh roots in doses which were not toxic for them. Medicinal effects were clearly seen. Extractions

Card : 1/2

ACCESSION NR: AP4012579

P/0007/64/000/006/0005/0005

AUTHOR: Rzeszowski, M.

TITLE: The New Polish Radar "TOR"

SOURCE: Skrzydlata polska, no. 6, 1964, 5

TOPIC TAGS: Radar, aircraft radar, shore radar

ABSTRACT: Recently, specialists from the Industrial Institute of Telecommunications conducted practical tests with the Polish-designed TOR radar at an airfield, and on the seacoast. It passed these tests with flying colors: not only did it record exactly every aircraft moving in the area of the field, but it clearly indicated the landing strips and even the people. Its seacoast examinations showed it informed in detail of ships moving in a port basin.

The TOR was designed by Tadeusz Gawron and Bohdan Jankowski. It is similar to sets produced in many countries of the world, including the British ASMI, the Phillips radar, and the United States ASDE.

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ACCESSION NR: AP4012579

The set operates with a pulse of 20 nanoseconds, or a 20 billionth part of a second on millimeter waves. These parameters make possible high discrimination and accuracy.

After tests have been completed with the model of the TOR, a prototype will be finished during 1964. It may be put to work at ports and airfields of Poland within the next several years.

B. Jankowski had previously collaborated in the development of the AVIA radar. T. Gawron, after finishing the development of the TOR, has been collaborating in the development of the AVIA/B, radar, which will be an improved version of the AVIA radar operating at the Okęcie airport in Warsaw.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: CO, SD

NO REF SOV: 000

OTHER: 000

Card 2/2

KONECHNYY, Ye.; ZHESHOVSKIY, M. [Rzeszowski, M.]

New Polish sporting gliders and airplanes. Kryl.rod 13
no.8:26 Ag '62. (MIRA 15:8)
(Poland--Airplanes) (Poland--Gliders (Aeronautics))

BOCHYNSKI, Zenon; RZESZOWSKI, Roman; SZURKOWSKI, Boleslaw

X-ray studies on the structure of BaTiO_3 - MgSnO_3 solid solutions.
Prace matem przyrod Poznan 11 no. 2:179-197 '64.

1. Department of Experimental Physics, A.Mickiewicz University,
Poznan.

LOPATKA, Bronisława; RZESZUT, Leszek

Hetero-hemagglutination test with chicken erythrocytes and hyperurobilinogenuria in prophylactic studies on viral hepatitis among school children in the city of Bialystok. Przegł. epidem. 18 no.1:67-70 '64.

1. Z Kliniki Chorob Zakaznych Akademii Medycznej w Bialymstoku (Kierownik: doc. dr. med. P. Boron).

DERUBSKA, Barbara; RZESZUTKO, Bronislawa

A case of a pulmonary form of lupus erythematosus. Gruzlica 33
no.4:347-349 Ap '65.

1. Z Kliniki Gruzlicy AM we Wroclawiu (Kurator: prof. dr. med.
J. Kaniak).

RANDOWA, Danuta; RZESZUTKO, Bronisława

The time of intrapulmonary mixing in chronic diseases of the lungs. Pol. arch. med. wewnet. 35 no.5:669-672 '65.

1. Z Kliniki Gruźlicy Akademii Medycznej we Wrocławiu (Kurator Katedry: prof. dr. med. J. Kaniak).

GARBINSKI, Tadeusz; RANDOWA, Danuta; RZESZUTKO, Bronislaw

The nitrogen mixing time in the lungs (nitrogen clearance)
and defective ventilation. Gruzlica 30 no.7:599-603 '62.

1. Z Kliniki Gruzlicy AM we Wroclawiu Kierownik: prof. dr med.
T. Garbinski.

(RESPIRATORY FUNCTION TESTS) (NITROGEN)

RZESZUTKO, Bronislawa

Behavior of the respiratory function in various cases of
respiratory insufficiency. Gruzlica 31 no.6:584-586 Je'63.

1. Klinika Ftizjatryczna AM, Wroclaw.

GARBINSKI, Tadeusz; RZESZUTKO, Bronislawa

Evaluation of the cough test with acetylcholine. Gruzlica 29 no.3:
269-272 Mr '61.

1. Z Kliniki Gruzlicy AM we Wroclawiu Kierownik: prof. dr med.
T. Garbinski.

(COUGH) (ACETYLCHOLINE pharmacol)

GARBINSKI, Tadeusz; RANDOWA, Danuta; RZESZUTKO, Bronislawa

Clinical value of establishing residual and total pulmonary capacity
in chronic respiratory diseases. Gruzlica 29 no.4:337-342 Ap '61.

1. Z Kliniki Gruzlicy AM we Wroclawiu Kierownik: prof. dr med. T.
Garbinski.

(RESPIRATION)

OWINSKI, Tadeusz; RZESZUTKO, Ryszard

The problem of auto-antibodies in sialosis. Czas. stomat. 18
no.8/9:1093-1097 Ag-S '65.

1. Z Kliniki Chirurgii Stomatologicznej AM we Wroclawiu
(Kierownik: prof. dr. T. Owinski).

POLAND/Chemical Technology - Chemical Products and Their Application. Synthetic and Natural Medicinal Substances. Galelicals and Medicinal Forms. H.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36009

Author : Kotula, Zb., Herman, H., Rzewnis, Kr.

Inst : -

Title : The Solubility of Streptomycin Hydrochloride in a Mixture of Methyl Alcohol and Acetone.

Orig Pub : Acta polon. pharmac., 1958, 15, No 4, 295-296.

Abstract : There were determined the mixture solubilities of 90, 85, 80, 75, 70, 65, 50 and 40% acetone and the corresponding 10, 15, 20, 25, 30, 35, 50 and 60% methyl alcohol. The data, represented graphically by tables and curves, may be utilized in the establishment of the most favorable conditions for the extraction of streptomycin hydrochloride from methanol solutions. -- I. Fodiman

Card 1/1

EXCERPTA MEDICA Sec 15 Vol 13/3 Chest Dis. Mar 60

761. RESECTION OF LUNG TISSUE AND TRACHEOBRONCHIAL LYMPH
NODES IN TUBERCULOUS CHILDREN - Resekcja tkanki płucnej i wycięcie
węzłów tchawiczo-oskrzelowych z powodu gruźlicy u dzieci - Rzepecki
T. Odd. Torakochir. D.S.O.P. w Rabce - GRUŻLICA 1959,27/3(219-227)
Tables 3 Illus. 7

The author has carried out 158 pulmonary resections in children for pulmonary tb or post-tb changes. 129 of these children were less than 15 yr. old and 29 were older than 15 yr. The early postoperative mortality amounted to 0.64%. Also there were only few postoperative complications. Two children presented severe haemorrhage in the resection cavity after the operation. Three other children developed bronchial fistulae at an early stage. Chylothorax occurred in one case; in 4 other cases there was a flare-up of the tuberculous changes in the contralateral lung and one child developed infarction of the mesentery of the small intestine. Resection of the tracheobronchial lymph nodes was performed in 2 children. The difficulty of this operation is emphasized. The low mortality rate and the low incidence of postoperative complications justify more extensive use of resection in children with tb alterations.

Warm - Łódź (XV, 7, 9)

EXCERPTA MEDICA Sec 15 Vol 9/11 Chest Diseases Nov 56

2670. RZEPECKI T. Osteoplastyczna torakoplastyka sposobem Björka w leczeniu gruźlicy płuc. Osteoplastic Björk thoracoplasty in the treatment of pulmonary tuberculosis GRUŻLICA 1956, 24/3 (163-172) Illus. 11

Early results of the osteoplastic Björk thoracoplasty as well as the advantages and drawbacks of the method are discussed. At the Sokolowski Sanatorium in Zakopane, 22 Björk thoracoplasties were performed; 17 of these being primary thoracoplasties and 5 post-resection thoracoplasties. The assessment of the early results indicates that the Björk thoracoplasty is less radical than the usual one since it does not result in concentric collapse, and the final results are worse than those after the usual thoracoplasty. The follow-up (from 5 to 10 months) showed: closure of cavity: 4 cases; residual cavities: 6 cases; suspicion of excavation: 5 cases. One patient died of operative shock; in one case resection of pulmonary tissue was necessary. The opinion is held that the indications for the Björk thoracoplasty are: cavities of less than 3 cm. in diameter with small surrounding lesions localized in the apex of the lung. In resection of pulmonary tissue the Björk thoracoplasty seems to have a theoretically justified advantage over the standard techniques. At the Sokolowski Sanatorium 2 technical modifications were introduced: (1) Suture of the dorsal part of the 2nd rib to the transverse process of the 5th vertebra, which does not influence the degree of collapse. (2) Total closure of the wound without drainage, which proved favourable.

(XV, 92)

3
BEK-UZAROV, Djordje M.
SOŠIĆ (In tupa); Given Name

Country: Yugoslavia

Academic Degrees: not given

Affiliation: Department of Physics, Institute of Nuclear Sciences
"Boris Kidrič"

Source: Belgrade-Vintcha, Bulletin of the Institute of Nuclear Sciences
"Boris Kidrič", Vol 11, Mar 1961, pp 277-283.

Data: "Counting Characteristics of Native Methane Investigated by
AK Proportional Flow Counter."

Co-author:

RZSZOT, I. K., Department of Physics, Institute of Nuclear Sciences
"Boris Kidrič".

GARBINSKI, Tadeusz; DERUBSKA, Barbara; RZESZUTKO, Bronislawa

Pulmonary calculi — pulmolithiasis. Pol. tyg. lek. 18 no.37:
1390-1393 9 S '63.

1. Z Kliniki Gruźlicy AM we Wrocławiu; kierownik: prof. dr
med. Tadeusz Garbinski:

(LUNG DISEASES) (CALCULI)
(BRONCHIAL DISEASES)

RZEVSKI, Dorde, inz.

Proposing contact network for Yugoslav railroads. Elektro-
privreda 16 no.6/7:288-297 Je-Jl'63.

OLES, Andrzej; RZEWNIS, Krystyna; GRUDZINSKI, Zbigniew; WIZIMIRSKI,
Wladyslaw

Use of domestic latex in the serological diagnosis of progressive
chronic rheumatism. Reumatologia (Warsz.) 2 no.4:331-338 '64

1. Ze Szpitala Wojewodzkiego w Rzeszowie (Dyrektor: dr. med.
W. Wizimirski).

RZEWNIS, Krystyna; ROSLIK, Danuta; WIECLAWEK, Bonifacy

Studies on the synergistic activity of tetracycline and erythromycin. I. Studies in vitro. Med.dosw.mikrob. 12 no.4:411-416 '60.

1. Z Zakładu Analitycznego Instytutu Antybiotyków w Warszawie.

(TETRACYCLINE pharmacol)

(ERYTHROMYCIN pharmacol)

WIECLAWEK, Bonifacy; RZEWNIS, Krystyna; ROSLIK, Danuta

Studies on the synergistic action of tetracycline and erythromycin.
II. Studies in vivo. Med.dosw.mikrob. 13 no.3:293-302 '61.

1. Z Zakladu Analitycznego Instytutu Antybiotykow w Warszawie i
Laboratorium Analitycznego Wydzialu Zdrowia Warszawa - Wola.

(TETRACYCLINE pharmacol) (ERYTHROMYCIN pharmacol)

POLAND

RZEWNIS, Krystyna and WIECLAWEK, Bonifacy, Analytical Department (Zaklad Analityczny), Institute of Antibiotics (Instytut Antybiotykow) in Warsaw (Director: Docent, Magister Inzynier, Bonifacy WIECLAWEK)

"Determination of Antibiotic Contents in the Organs and Tissues of Chickens Fed on a Diet Supplemented with Chlor-tetracycline."

Warsaw-Lublin, Medycyna Weterynaryjna, Vol 19, No 7, Jul 63, pp 398-400

Abstract: [Authors' English summary modified] Authors' investigation, summarized in a table, revealed that when chickens obtained the antibiotic in the food, traces of it were found in the stomach content, but not in the meat or internal organs. If the antibiotic was administered by injection no traces of it were found in the blood serum or intestinal content, but did appear in the meat, kidney bile, liver, contents of stomach and duodenum. Boiling or frying the meat for 15 minutes inactivated the antibiotic completely. There are 8 references: 1 Polish, 3 German, and 4 Western.
1/1

the yolks of the eggs]. Of the six (6) references, one is in German, and the others are English sources.

RZEWNIS, Krystyna

Studies on associated effects of antibiotics on pathogenic micro-organisms. Med. dosw. mikrob. 14 no.2:167-170 '62.

1. Z Zakladu Analitycznego Instytutu Antybiotykow w Warszawie.
(ANTIBIOTICS pharmacol)

L 10700-07
ACC NR: AP6022855

SOURCE CODE: PO/0102/66/000/003/0006/0011

AUTHOR: Bekiesinski, Ryszard (Master Engineer); Rzewski, Henryk (Master Engineer) 52

ORG: none

TITLE: Effect of water in the fuel on the operation of a turbine engine

SOURCE: Technika lotnicza i astronautyczna, no. 3, 1966, 6-11

TOPIC TAGS: fuel, fuel contamination, turbine engine, fuel property, fuel test

ABSTRACT: The article discusses the problem of the effect of water content in fuels on the operation of turbines engines, the causes of the accumulation of water in fuel and its effects on the individual elements of the two most used feed systems, the Lucas system and the closed system which is a system somewhere between the Lucas system and the Junkers system. Methods of coping with the problem and of controlling and checking the fuel for water content just before loading the plane tank are dealt with. The most effective method of eliminating water from fuel is the electrical method which, when used on type JP-5 fuel having a water content of 3%, reduces the water content to 0.00006%. It is pointed out that fuel control for water content must be carried out not only in the laboratory, but immediately before preflight fueling. Methods for the preflight control of water content in the fuel are discussed. Orig. art. has: 9 figures and 1 table.

SUB CODE: 01/ SUBM DATE: none/ ORIG REF: 002/ SOV REF: 003

REF: 621.138-64

SZELAG, Janusz; RZEMUSKA, Stanisława

Evaluation of the vaccine and the effectiveness of vaccinations against typhoid fever. XXII. An epidemic of typhoid fever in Siedlce in 1962. Przegł. epidem. 18 no.4:427-431 '64.

1. Z Warszawskiej Wojewodzkiej Stacji Sanitarno-Epidemiologicznej w Aninie (Dyrektor: dr. med. J. Zasztowt).

ACC NR: AP7000958

SOURCE CODE: PO/0047/66/017/005/0525/0536

AUTHOR: Rzewski, H.

ORG: Institute for Nuclear Research, Swierk (Instytut Badan Jadrowych)

TITLE: Metastable defects in germanium

SOURCE: Postepy fizyki, v. 17, no. 5, 1966, 525-536

TOPIC TAGS: electron bombardment, germanium property, metastable state

ABSTRACT: The methods for creating and determining the magnitude of metastable defects in germanium are reviewed and evaluated. A model of the metastable state of the Frenkel's couple hole-interstitial atom, proposed by G. K. Wertheim (Phys. Rev., 115, 568, 1959) and J. W. Mackay and E. E. Klontz (Radiation Damage in Solids, 3, 27, 1962, Proceedings, Venice), is discussed in detail. It is pointed out that all other defects caused by electronic bombardment result from modification of the Frenkel defect. The efficiency of creating the defects is a function of the irradiation temperature and increases rapidly with the temperature. A new method of producing defects in N-type germanium, briefly discussed by the author earlier, is further discussed. It consists of the bombardment of the sample by means of a short pulse of ~ 1 -MeV electrons from a Van de Graaf accelerator. The advantage of the method is the elimination of the temperature effects which are generally harmful to the process. Orig. art. has: 6 formulas and 7 figures.

SUB CODE: 11/ 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 019

Card 1/1

LACKI, M.; LUKASIAK, A.; RUDOLF-SKOKOWSKA, M.; RZEWSKA, I.

Analysis of the physical growth and health and sanitary conditions
of children in grammar schools. *Pediat pol* 36 no.9:941-953 9 '61.

1. Z Działu Metodyczno-Organizacyjnego -- kierownik: dr med. I.Sztachelska
i z Sekcji Higieny Szkolnej-- Kierownik: dr med. M.Rudolf-Skokowska
Instytutu Matki i Dziecka w Warszawie Dyrektor: prof. dr med. Fr.Groer
z Departmentu Ochrony Macierzyństwa i Zdrowia Dziecka Dyrektor:
dr. med. E.Pomerska i z Działu Opracowań Statystycznych GUS Dyrektor:
A.Lukasiak.

(SCHOOL HEALTH)

(GROWTH)

AUTHOR: Bokiesinski, Ryszard (Master engineer); Rzewski, Henryk (Master engineer)

ORG: none

TITLE: Filtration of turbine engine fuels at low ambient temperatures

SOURCE: Technika lotnicza i astronautyczna, no. 6, 1966, 6-11

TOPIC TAGS: turbine engine, aircraft fuel system, fuel property

ABSTRACT: The article deals with the effect of low ambient temperatures on the conditions of flow of fuel in an airplane - turbine engine system. A discussion is given of the process of increase of hydraulic resistances in fuel systems as a result of changes in fuel viscosity and contamination of the fuel filters with crystals of hydrocarbons, tars and ice crystals which are precipitated from the fuel and can impair the operation of a turbine engine. The formation of ice on parts of the fuel system is considered, and methods are indicated for improving the conditions of filtration of fuels by chemical means and by modifications of design. Orig. art. has: 8 figures and 4 tables.

SUB CODE: 21/ **SUBM DATE:** none/ **ORIG REF:** 001/ **SOV REF:** 004

RZEWSKI, Kazimierz, Inz.

Problem of developing information services in factories. Przegł
techn 85 no.10:4,8 8 Mr'64.

RZEWSKI, Kazimierz

Programming of the activities of the workshop centers for technological
and economic information. Przegl gaod 37 no.3:127-128 Mr '65.

RZEWSKI, K., inz.

The role of local branches of the Association of Polish Geodesists
in the organization of information centers. Przegl techn
no.32:10 12 Ag '62.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R001446530013-4
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R001446530013-4"

RZEWSKI, Kazimierz, inz.

Discussing national conferences on technological and economic
information. Przegl techn 84 no.2:9 13 Ja '63.

RZEWSKI, Kazimierz, inż.

Tasks of the Association of Polish Geodesists in organizing
technological and economic information services and libraries.
Przeł geod 36 no. 1:25-26 Ja '64.

RZEWSKI, Kazimierz, inz.

The role of technological and economic information in the per-
fection of the technological staff. Przegl geod 34 no.7:
305-306 J1 '62.

POLAND/Electricity - Semiconductors.

G

Abs Jour : Ref Zhur Fizika, No 11, 1959, 25349

Author : Bartenbach, M., Buras, B., Rzewuski, H., Tomczak, Z.

Inst : Institute of Nuclear Research, Polish Academy of Sciences
Warsaw

Title : ^{ca.} Study Stimulation and Quenching of Photoconductivity in
Cadmium Sulfide by Infrared Radiation

Orig Pub : Acta phys. polon., 1958, 17, No 6, 389-395

Abstract : An investigation is made of the dependence of the effect
of quenching of photoconductivity in CdS crystals on the
ratio of the intensity of the source of excitation of
photocurrent to the intensity of the infrared light. At
small intensity of the exciting light, illumination with
infrared causes a photocurrent to flow. At a definite
ratio of intensity of the exciting light and intensity

Card 1/2

POLAND/Electricity - Semiconductors.

G

Abs Jour : Ref Zhur Fizika, No 11, 1959, 25349

of the infrared light, there are no changes in the photocurrent upon illumination with infrared. If this ratio is greater than the last quantity, quenching of the photoconductivity takes place. A similar dependence is observed for different wave lengths of the exciting light and the infrared light, greater than 0.7 microns. When using x-rays for excitation, similar effects are also observed. The results can be explained on the basis of the model proposed by Rose (Referat Zhur Fizika, 1956, No 2, 4390), in which it is suggested that free holes are produced when the photoconductor is illuminated with infrared, and by assuming that the photocurrent due to the infrared is connected only with the holes. Theoretical calculations are given, based on these assumptions, which agree with the experimental data. Bibliography, 9 titles.

Card 2/2

RZEWUSKI, Jan

A possible formulation of physical laws in spinor space. Matem
fizyka astronom Wroclaw 3:57-75 '62.

20804

P/046/60/005/007/004/007
D219/D304

26.2244

AUTHOR: Rzewuski, Henryk

TITLE: The effect of reactor fast neutrons on semiconductors

PERIODICAL: Nukleonika, v. 5, no. 7-8, 1960, 461 - 465

TEXT: This paper, presented at the reactor conference of Socialist countries at Rossendorf (GDR) held from June 13-18, 1960, reports investigations carried out by the I-B Department of Nuclear Physics of the Institute of Nuclear Research, Warsaw. Studies of the change of electrical conductivity and resistivity with irradiation time of samples of n-type germanium in a probe, shielded from slow neutrons have enabled an estimate of the first upper donor energy level of 0.206 eV in agreement with results of other authors. Abstractor's note: Authors unspecified. This change in conductivity has also been used to measure the axial fast neutron flux variation in the WWR-S reactor. Continuous measurements of the electrical conductivity and Hall coefficient of germanium during irradiation gave re-

Card 1/2

P/046/60/005/007-8/0C4/007
A224/A026

21.6100

AUTHOR: Rzewuski, Henryk

TITLE: The Effect of Reactor Fast-Neutrons¹⁹ on Semiconductors²¹

PERIODICAL: Nukleonika, 1960, Vol. 5, No. 7-8, pp. 461-465

TEXT: The paper presented at the reactor conference of Socialist Countries, convened at Rossendorf on June 13 to 18, 1960, and written in English language, gives an outline of investigations on the effects of fast-neutron bombardment upon solids and semiconductors. The investigation was carried out by the Zakład IB-Fizyki Jądrowej Instytutu Badań Jądrowych (IB Department of Nuclear Physics at the Institute of Nuclear Research), with the use of the WWR-S reactor in Swierk (Warsaw). The dependence of electric conductivity, resistivity and photoconductivity on the time of irradiation in n-type germanium sample has been determined and is given in a graph (Figure 1). The research will be continued. There are 2 figures and 4 references: 3 English and 1 Soviet.

ASSOCIATION: Polish Academy of Sciences, Institute of Nuclear Research, Warsaw,
Department of Nuclear Physics

SUBMITTED: May 9, 1960
Card 1/1

VB

STOPYRA, Jozef; SZULC-STAYRO, Halina; RZEWUSKA, Helena

Studies on the infection state in children at the preventive tuberculosis sanatoria in Oborniki Slaskie. Wlad. parazyt. 10 no.4:404-405 '64

I. Panstwowy Zespól Sanatoriów Przeciwgruzliczych, Oborniki Slaskie.

RZEWUSKI, Henryk

The effect of reactor fast neutrons on semiconductors. Nukleonik
5 no.7-8:462-465 '60.

I. Polish Academy of Sciences, Institute of Nuclear Research,
Warszawa, Department of Nuclear Physics.

ACC NR: AP6025064

SOURCE CODE: FO/0044/66/000/005/0019/0027

AUTHOR: Rzewski, H. (Major; Master Engineer); Bekiesinski, R. (Master Engineer)

ORG: None

TITLE: Accidental stopping of turbojet engine and starting it again in flight

SOURCE: Wojskowy przeglad lotniczy, no. 5, 1966, 19-27

TOPIC TAGS: turbojet engine, turbojet aircraft, turbojet engine test, *ENGINE STARTER, SYSTEM*

ABSTRACT: The article discusses the factors causing turbojet engines to stop or disengage in flight and ways of starting them up again in the air. Whereas two groups of causes are preventable and dealt with here, a third group of causes of engine operation interruption, in which the source of the trouble is the failure or damage of an individual engine part, is not discussed. It is pointed out that the manual adjustments that the pilot can effect to start the turbojet engine up again are in general complex, and that the turbojet engine is most likely to stop functioning, if it is going to do so at all, at high altitude as the plane approaches its ceiling. Orig. art. has 4 figures and 1 formula.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 002/ SOV REF: 002/ OTH REF: 001/

Card 1/1

Rzewuski, H.

4

621.315.59 : 537.311.33
✓4111. Use of electric field pulses as a method of
investigating semiconducting films: H. Rzewuski
AND L. Sosnowski. Bull. Acad. Polon. Sci. Cl. 3, Fe
3, No. 2, 101-5 (1955).
The conductivity of microcrystalline films of PbS
evaporated in vacuo in glass envelopes has been
observed to be modulated by the application of a
200 c/s square-wave of voltage to an electrode on the
outer surface of the glass, a balanced circuit being
used to suppress direct capacitance coupling effects.
The decay of the modulation during each half-cycle
is interpreted in terms of the redistribution of the
induced carriers between the conduction (or valence)
band and the surface states. Some experimental
results are given. F. P. ROBERTS

ROBERTS

Rzewuski, H.

Investigation of lead sulfide layers by the electric field pulse method. H. Rzewuski (Polish Acad. Sci., Warsaw). *Acta Phys. Polon.* 16; 237-56(1957). — A no. of microcrystal layers of evapd. PbS in vacuum envelopes were investigated. The previously developed method (*Bull. acad. polon. sci., Classe III 2*, 101(1955)) of investigating semiconductor layers by applying, in a condenser-like arrangement, a pulsed elec. field to the layer is discussed. On the basis of this method, the following were detd.: the type of layer investigated; the type of barrier layer; the concn. of the majority carriers; the mobility of the majority carriers; the min. of the surface states; the relaxation time of the barrier. The kinetic changes of the barrier layer concd. are discussed. The accuracy of the pulse method used to investigate the type of semiconductor layer, as well as possibilities of its application, are discussed. R. Beng

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FM

RZEWUSKI, H.

Sosnowski, L. Use of electric field pulses as a method of investigating semi-conducting films. In English. p. 101.
BULLETIN, Varsovie, Vol. 3, no. 2, 1955.

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

RZEWUSKI, H.

537.311.95 : 621.315.59
4752. Use of electric field pulses as a method of
investigating semiconducting films. H. RZEWUSKI
AND L. SOSNOWSKI. *Bull. Acad. Polon. Sci. Ser. B*,
3, No. 2, 101-5 (1955).

The conductivity of microcrystalline films of PbS
evaporated *in vacuo* in glass envelopes has been
observed to be modulated by the application of a
200 c/s square-wave of voltage to an electrode on the
outer surface of the glass, a balanced circuit being
used to suppress direct capacitance coupling effects.
The decay of the modulation during each half-cycle
is interpreted in terms of the redistribution of the
induced carriers between the conduction (or valence)
band and the surface states. Some experimental
results are given.

F. P. ROBERTS (R)

Handwritten notes and a circled number '1'.

RZ
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400

Królikowski, W., and Rzewuski, J. Co-variant one-line formulation of the many-body problem in the quantum theory. Bull. Acad. Polon. Sci. Cl. III. 3 (1955), 353-359. 1 - F/W

The aim of the authors is to reduce the integro-differential equations in quantum field theory from their original four-dimensional to an equivalent three-dimensional form. This is achieved in principle by means of a general theorem whose proof is deferred to a further paper. The connection between the three- and four-dimensional kernels is rather involved, so the authors suggest a perturbation approach for practical applications. S. Fubini (Torino).

(1)

8/21/55

Rzewuski, J

Rzewuski, J. Relativistic quantum dynamics of a system
of interacting particles. Acta Phys. Polon. 13 (1954),
29-43. (Russian summary)
Relativistic systems of particles interacting by means of
retarded (or advanced) forces are considered. The inter-
action is assumed small, the co-ordinate and momentum
operators of the particles being expanded in powers of
the interaction constant. In the lowest order of approxi-
mation, these obey the equations of motion for non-
interacting particles and can be quantized directly.
Higher-order approximations are expressed in terms of the
lowest order, and the quantization scheme carried
through, for this scheme of relativistic quantum dynamics.
A. Salam (Cambridge, England).

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1 - F/W
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RDW
TMM

POLON

530.145

6261. Conservation laws in non-local field theories.
J. RZEWUSKI. *Acta phys. Polon.*, 12, No. 1, 14-25

1959
Expressions for the current density and energy-momentum and angular momentum tensor densities in non-local, classical, field theories are constructed which satisfy differential conservation laws. The tensor densities contain (generally infinite) series of differential operators. Definitions of tensor densities in terms of integral operators are then discussed. It is shown that for scattering problems they must contain differential operators, for bound-state problems they can be defined in terms of integral operators alone. In both cases only integral conservation laws are satisfied.

G. FIELD

RDW
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RZEWUSKI, H.

POLAND/Electricity - Semiconductors

G-3

Abs Jour : Ref Zhur - Fizika, No 7, 1958, No 15926

Author : Rzewuski H.
Inst : Warsaw University, Poland
Title : Investigation of Lead Sulfide Layers Method

Orig Pub : Acta phys. polon., 1957, 16, No 4, 237-256

Abstract : Investigations were made of polycrystalline layers of lead sulfide, coated by evaporation in vacuum in a glass substrate between two graphite electrodes. The electric field, in the form of rectangular pulses, was applied to the layer in the capacitor, one plate of which was the metallic electrode and the other the layer itself. With the aid of a special oscillograph, a study was made of the waveform and the magnitude of the pulses obtained on a load resistance connected in the circuit in series with the specimen and the dc source, with simultaneous application of a pulsed field on the specimen. To compensate against false signals, a special bridge measuring circuit was used. With the aid of this method, the author

Card : 1/2

POLAND / Physical Chemistry. Crystals.

B

Abs Jour: Ref Zhur-Khimiya, No 24, 1958, 80520.

Author : Rzewuski, H.

Inst : NOT given.

Title : Effect of Nuclear Radiation on Semiconductors.

Orig Pub: Nukleonika, 1958, 3, No 3, 255-272.

Abstract: Review. Bibliography includes 205 names.

Card 1/1

RZEWSKI, J.

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P.O.L. ◀

530.144
2037. A note on perturbation theory. J. Rzewski.
Acta phys. Polon., 11, No. 2, 179-88 (1952).
The identity of the results of the new and the old
perturbation theory is shown by a direct transition.
Feynman's method is presented in a simple form
based on integral equations which is evidently in-
variant not only in the results but throughout the
derivation. The problem of scattering on bound
states is treated by means of the modern techniques.
A.

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~~REZ~~ RZEŃWASKI

POL.

3213 639.6:530.145

Breywasi J. Relativistic Quantum Dynamics of a System of Interacting

Particles

Acta Physica Polonica (PAN) No. 1, 1964, pp. 29-43, 1 fig.

The relativistic problem of interacting particles is quantized by use of the approximation method. The solutions of the equations of motion are represented as expansions in powers of the interaction constant. In the lowest order of approximation, they obey the equations for non-interacting particles and may therefore be quantized directly. Higher order approximations may be expressed in terms of the lowest ap-

proximation allowing all physically important quantities to be expressed as expansions in powers of the interaction constant with coefficients depending on the unperturbed operators with simple commutation rules. Equations determining the S-matrix for scattering problems are given. As an example the explicit solution for S is calculated to the first approximation.

PH

L

2000

530.149

9405. Differential structure of non-local theories. II.
J. RZEWSKI, *Acta phys. Polon.*, 14, No. 1-2, 121-34
(1955) PH

For Pt. I, see Abstr. 7110 (1954). A differential description of non-local systems is obtained by replacing the original integro-differential equations containing integrals over space-time by equivalent integro-differential equations containing integrals over a space-like hypersurface only. These equations provide a description of the system which is local in time. The construction of the coefficients of the equation in question is carried out in the linear as well as in the general non-linear case. The calculations are illustrated by a particularly simple example. The

admissibility of form-factors containing poles in the Fourier representation (corresponding to multi-mass equations) is discussed.

Smw
Ry

Rzewuski, J.

3978. CO-VARIANT ONE-TIME FORMULATION OF THE MANY-BODY PROBLEM IN THE QUANTUM THEORY. W. Królakowski and J. Rzewuski. Bull. Acad. Polon. Sci. Cl. 3, Vol. 3, No. 7, 353-9 (1955).

530.145

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[Handwritten mark]

A covariant one-time formulation is obtained by transforming the conventional many-time equations into other equivalent equations which relate only those values of the wave-function and its derivatives which correspond to one space-like hypersurface σ .

G.E. Brown

[Handwritten initials]

MT

RZEWUSKI, J.

Differential structure of nonlocal theories. II. p. 121. ACTA
PHYSICA POLONICA. Vol. 14, no. 1/2, 1955. In English.
Warszawa.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

RZEWSKI, J.

POLAND/Theoretical Physics - Quantum Electrodynamics'

B-5

Abs Jour : Ref Zhur - Fizika, No 6, 1958, No 12374

Author : *Krolkowski W., ~~**Rzewski J.~~
Inst : *Institute of Physics, Polish Academy of Sciences, Warsaw,
**Institute of Physics, Polish Academy of Sciences, Wroslaw,
Poland.

Title : Relativistic Two-Body Problem in One-Time Formulation Separation of Angular Variables in the Case of One-Quantum Interaction in Electrodynamics

Orig Pub : Acta phys. polon., 1956, 15, No 5, 321-341

Abstract : The authors consider simultaneous quantum relativistic equation for two fermions, obtained by them previously (Referat Zhur Fizika, 1956, No 8, 21836; No 12, 33783). To separate the angle variables, use is made of the explicit form of the equation in the momentum space. The equation is integro-differential. Only those terms, that describe the one-quantum interaction are retained in the expansion for the integral kernel. The eigenfunctions of the operator of total

Card : 1/2

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RZ
APPROVED FOR RELEASE

1958. SOME REMARKS ON NON-LOCAL THEORIES

J. Rzewuski

Bull. Acad. Polon. Sci. Cl. 3, Vol. 5, No. 4, 393-400 (1957)

Using the example of two scalar bi-local fields, one real and one complex, with non-local interaction, it is shown that, under certain conditions on the two mass operators, the system can be described by equations for local fields with non-local interaction. The particular models proposed by Yukawa (Abstr. 7448/1953) and by Markov (Abstr. 97/1957) are discussed as special cases of these equations and some consequences for the form-factors and the models of elementary particles are pointed out.

W. A. Herney
KAP 147

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Rzewuski, J.

ACTA PHYSICA POLONICA
Vol. XXI, Nr. 6, 1957

ON INVERSIONS OF SPACE AND TIME

J. RZEWUSKI

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(Received June 6, 1957)

In this paper the transformation properties of spinors and pseudospinors with respect to inversions of space and time are investigated in some detail. In particular the various possible two-component theories are investigated. A purely geometrical approach to the theorem of Lüders and Pauli is pointed out.

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✓ Krzywicki, A.; Rzewuski, I.; Zamorski, J.; and Zięba,
A. Non-local problems in the calculus of variations. II.
Ann. Polon. Math. 4 (1957), 30-39.

In part I [same Ann. 2 (1955), 77-96; MR 17, 861] the authors considered the first variation for the problem of minimizing a functional of the form

$$I = \int_a^b \int_a^b L(t, t', q(t), q(t'), \dot{q}(t), \dot{q}(t')) dt dt'$$

where q is a function of a single variable. In this paper an oscillation theorem is derived for the linear integro-differential equation which is the Euler-Lagrange equation for I when the integrand L is a quadratic form, under the assumption that there is a uniquely determined two parameter family of solutions when a and b are fixed. Then the solutions are also the solutions of a second order linear differential equation, so the classical theorem of Sturm applies. Also the second variation of the integral, and sufficient conditions for a weak minimum are discussed.

ū.I. {Attention should be called to a dissertation by A. R. Jacoby [Iterated integrals in the calculus of variations, Univ. Chicago, 1946 (microfilm copies obtainable from

REWORK

Distr: *LE3d*

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1041. FIELD THEORY. I. CLASSICAL THEORY. J. Berezinski.
Warsaw: Państwowe Wydawnictwo Naukowe (1988) 397 pp.
[Physical Monographs].
/O This is a book on the classical theory of fields, written largely as an introduction to the study of quantum theory. Spinor and tensor fields are introduced in a very brief account of the representations of the Lorentz group, with, however, some detail on the different representations of space and time inversion. There are numerous examples of interacting fields and methods of solution, including non-local interactions. There is a detailed chapter on the Δ -functions and their classical interpretation. J.C. Taylor

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PAS JR

RZEWUSKI, J.

W. Rubinowicz' Kwantowa teoria atomu (Quantum Atomic Theory); a book review. p. 475.

POSTĘPY FIZYKI. (Polskie Towarzystwo Fizyczne) Warszawa, Poland. Vol. 9, no. 4,
1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 8, August 1959.
UNCL

POLAND/Theoretical Physics - Quantum Mechanics

B-4

Abs Jour : Ref Zhur - Fizika, No 2, 1959, No 2533

Author : Rzewuski J.

Inst : JOINT Institute for Nuclear Research

Title : On Inversions of Space and Time

Orig Pub : Acta phys. polon., 1957, 16, No 6, 435-445

Abstract : The problem of the behavior of particles under space and time inversions is considered with the aid of spinor representations of the wave functions. The author considers in detail various types of equations that employ only two-component spinors. Along with the two-component neutrino, the equation for which is invariant under inversion, there can exist a two-component equation, which is not invariant under time reversal. The author indicates that the CPT theorem of Luders-Pauli is an expression of this fact that the Lagrangian, which is invariant under proper Lorentz rotations, is automatically invariant under an even number of inversions.

Card : 1/1

POLAND/Theoretical Physics - Quantum Theory of Fields

B

Abs Jour : Ref Zhur Fizika, No 8, 1959, 17061

Author : Rzewuski, J.

Inst : Institute of Physics, Polish Academy of Sciences; Wrocław University, Poland

Title : The Spinor Space

Orig Pub : Bull. Acad. polon. sci. Ser. sci. math., astron. et phys., 1958, 6, No 4, 261-269

Abstract : The most general connection between the components of a four-position vector X_α and a certain spinor of second rank $z_{\alpha\beta}$ ($\alpha, \beta = 1, 2$) may have the form

$$X_1 = 1/2(z_{1\bar{2}} + z_{2\bar{1}}), X_2 = 1/2^i(z_{1\bar{2}} - z_{2\bar{1}}),$$

$$X_3 = 1/2(z_{1\bar{1}} - z_{2\bar{2}}), X_0 = -1/2(z_{1\bar{1}} - z_{2\bar{2}}).$$

Card 1/3

POLAND/Theoretical Physics - Quantum Mechanics

B-4

Abs Jour : Ref Zhur - Fizika, No 2, 1959, No 2534

Author : Rzewuski Jan

Inst :

Title : On Inversions of Time and Space

Orig Pub : Postepy fiz., 1958, 9, No 2, 159-182

Abstract : No abstract

Card : 1/1

Abs Jour : Ref Zhur Fizika, No 1, 1960, 208

of infinitely small transformations, and their commutations relations are found. Correspondingly, the thirteen group parameters correspond to thirteen conservation laws. Six of these correspond to invariance under ordinary coordinate rotations, and the other six, it is proposed to connect six more with rotations in isotopic space, while the remaining one is to be connected with the conservation of the number of baryons. In the preceding articles the theory was formulated in four-dimensional complex spinor space; it is found to be more convenient to go over to an eight dimensional real spinor space.

Card 2/2

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AUTHOR: Rzewuski, J.

POL/45-18-6-2/5

TITLE: Differential Equations in the Spinor Space

PERIODICAL: Acta Physica Polonica, 1959, Vol 18, Nr 6, pp 549-572 (Poland)

ABSTRACT: The present paper is a continuation of several earlier investigations in this field. The author endeavors to describe physical laws in an eight-dimensional spinor space rather than in the four-dimensional Minkowski space. Some covariant differential equations are investigated in the spinor space and are compared with the corresponding Dirac- or Klein-Gordon equations in the Minkowski space. The author first gives a survey of the most important results obtained in earlier papers (I - IV). The bilinear connection of the eight real spinor variables $\text{Re } z_\alpha$, $\text{Re } z_\alpha^*$, $\text{Im } z_\alpha$, and $\text{Im } z_\alpha^*$ ($\alpha = 1, 2$) with the four vector variables x_μ ($\mu = 1, \dots, 4$) is investigated in detail. For the purpose of solving the general differential equations, besides the vector variables, four variables $\varphi_1, \varphi_2, \varphi_3, \varphi_4$, which are independent of the former are introduced for

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Differential Equations in the Spinor Space

POL/45-18-6-2/5

the remaining degrees of freedom; these variables have the character of angles or hyperbolic angles, by means of which it is possible to investigate each function $f(z_{\alpha;\beta}, z'_{\alpha;\beta})$ of the four complex (eight real) variables $z_{\alpha;\beta}$ also as functions of the eight real variables χ_{μ}, τ_{μ} . Equations in the spinor space which are convenient with respect to the direct product of two unimodular groups c.c' are expressed in terms of the variables χ_{μ} and τ_{μ} . Thus, correspondence with the conventional treatment in the x-space is established. In the last paragraph the solutions are given and briefly discussed. There are 3 references.

ASSOCIATION: Institute of Theoretical Physics, University of Wrocław;
Institute of Physics (Wrocław Branch), Polish Academy of
Sciences 4

SUBMITTED: March 21, 1959

Card 2/2

RZEWUSKI, J.

Two-particle Green's function in the spinor space. Bul Ac Pol mat 8
no.11/12:783-787 '60.

1. Institute of Theoretical Physics, University, Wroclaw, and Insti-
tute of Physics (Wroclaw Branch), Polish Academy of Sciences. Pre-
sented by L. Infeld.

(Functions) (Spaces, Generalized)

MOZRZYMAS, J.; RZEWUSKI, J.

Second order invariant differential equation in the spinor space.
Bul Ac Pol mat 9 no.3:225-228 '61.

1. Institute of Theoretical Physics, Wroclaw University and Institute
of Physics, Wroclaw Branch, Polish Academy of Sciences. Presented by
L. Infeld.

(Equations, Differential) (Spaces, Generalized)

LOPUSZANSKI, J.; RZEWUSKI, J.

Functional formulation of the theory of reliability. Bul Ac Pol
tech 9 no.3:185-189 '61.

1. Institute of Theoretical Physics, University, Wroclaw Institute of
Physics, Wroclaw Branch, Polish Academy of Sciences. Presented by
J. Groszkowski.