"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

27871
Z/038/61/000/011/002/004
D291/D305

Measuring low activities...

3 tables, 1 figure and 6 references: 5 Soviet-bloc, 1 unidentified.

ASSOCIATION: Ústav jaderného výzkumu, Praha (Nuclear Research Institute, Prague)

Card 4/4

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, J.

CZECHOSLOVAKIA

BAIER, J.; RALKOVA, J.

Nuclear Research Institute, Czechoslovak Academy of Sciences (Institut für Kernforschung, Tschechoslowakische Akademie der Wissenschaften), Řež near Prague (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 2, Feb 1966, pp 371-380

"Behavior of strontium and cesium during the fixation of radioactive products in basalt."

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, Jarmila

Determination of low specific activities in solutions.
Jaderna energie 8 no.8:281-284 Ag '62.

1. Ustav jadernoho vyzkumu, Ceskoslovenska akademie ved.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 48290-65 EWT(m) Peb DIAAP

ACCESSION NR: AP5013585 CZ/0038/65/000/003/0091/0094

AUTHOR: Ralkova, Jarmila

9

19

TITLE: Determination of Sr^{90} in water

B

SOURCE: Jaderna energie, no. 3, 1965, 91-94

TOPIC TAGS: strontium, isotope, water sanitation

ABSTRACT: A rapid control method of Sr^{90} determination that is appropriate if mainly rapidity and less accuracy are required is described. The more accurate methods for the determination of Sr^{90} traces using natural or artifical sorbents are proved on the basis of others' experiences. Orig. art. has: 2 figures, 1 graph.

ASSOCIATION: Ustav jaderneho vyzkumu CSAV, Rez (Institute of Nuclear Physics, CSAV)

SUBMITTED: 00 ENCL: 00 SUB CODE: NP, GC

NO REF SOV: 000 OTHER: 011 NA

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, Jarmila

Diffusion of radioisotopes in basalt. Silikaty 9 no.1:12-24 '65.

1. Institute of Nuclear Research of the Czechoslovak Academy of Sciences, Rez near Prague. Submitted May 10, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 35431-65 EWT(m)/EWP(b)/EWP(e) Pq-4/Peb DIAAP WH

ACCESSION NR: AP5007769 Z/0012/65/000/001/0012/0024

26
21
B

AUTHOR: Ralkova, J.

TITLE: Radioisotope diffusion in basalt

SOURCE: Silikaty, no. 1, 1965, 12-24

TOPIC TAGS: radioisotope disposal, isotope diffusion, basalt, reactor fuel, radioactive waste, glass, aluminum, radiocesium, radiostrontium, isotope fixation

ABSTRACT: Glass and molten rock have been found to be excellent and economical materials to render insoluble highly radioactive wastes, such as spent fuel from reactors which radiates tens of kilocuries/kg and is usually highly acid. Four types of basalt found in Czechoslovakia at Hollberg, Tesetice, Dolanky and Oharice were studied in detail and that from Tesetice was found to absorb ions most rapidly in the resolidified form. The Statni vyzkumny ustav sklarsky (State glass research institute) prepared specimens by melting crushed basalt at 1350-1450C, tempering for two hours at 650C and then cooling gradually for 24 hours to room temperature. Small plates 20 x 20 x 1 mm were cut and ground smooth. Drops of a Cs-137 or Sr-90 solution were placed on such plates and the escape of radioisotope prevented by heating to 600C, cooling, and washing with

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L 35431-65

ACCESSION NR: AP5007769

0

nitric acid in distilled water. The plates with radioactive cesium were then placed in a small muffle furnace and the heat steadily raised from 440C while measuring the radiation at specific intervals with a beta GM tube. Radiation from similar strontium-90 specimens was measured and recorded after deducting impulses caused by the accompanying Y-90. Each specimen was tested without a filter and then with an aluminum filter of 124 mg/cm^2, which absorbed all Sr-90 rays and half the Y-90 rays. Radiation rates of the two isotopes in basalt were charted at temperatures from 440 to 850C and found to be on the order of 10^{-3} up to 600C for cesium and 660C for strontium, with 10^{-2} at higher temperatures. The diffusion coefficients of each isotope in basalt and in glass were tabulated and charted, as well as their absorption curves in aluminum. As the temperature rose from 440 to 850C, the diffusion coefficients varied from around 10^{-13} to 10^{-11}. The physical and chemical properties of Tesetice basalt were also studied in relation to heat treatment ranging from 650 to 1000C, and x-ray studies were made of the internal structure after eight types of tempering. Crystal size and the recrystallization process were analyzed in relation to ion diffusion at various temperatures, and the ion activation energy was found to be $E_{Cs} = 95$ kcal/mol and $E_{Sr} = 105$ kcal/mol, which would indicate predominantly interstitial diffusion. The chief advantage of basalt is its recrystallization at high temperatures, which improves its physical and chemical properties for isotope

Card 2/3

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

L 35431-65

ACCESSION NR: AP5007769

5

fixation. If the decay heat does not exceed 600C, Cs and Sr diffusion coefficients will not exceed 10^{-15} cm^2/sec, which is suitable for safe disposal of radioactive wastes. "The author is indebted to Dr. J. Voldan of the Stat. vyzkumny ustav sklarsky (State glass research institute) for providing the basalt specimens and analyzing their properties, Dr. E. Kucera, at the Ustav fysikalni chemie CSAV (Physical chemistry institute) for the x-ray analyses, and V. Vesely for help in preparing the specimens." Orig. art. has: 5 figures, 5 tables and 12 formulas.

ASSOCIATION: Ustav jaderneho vyzkumu CSAV, Rez near Prague (Nuclear research institute, CSAV)

SUBMITTED: 10May64 ENCL: 00 SUB CODE: MT, NP

NO REF SOV: 001 OTHER: 007

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

BALOV, R.

Animals of Tanganyika. IUn.nat. no.8:20-21 Ag '57. (MLRA 10:8)
(Tanganyika Preserve)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

1

An apparatus for determining warfare agents and injurious gases in the air. M. M. Raler. *Vestnik Protivovozdushnoi Oborony* 11, No. 10, 37 9(1940); *Chem. Zentr.* 1941, I, 600.—An easily transportable app. is described. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

54. **Sodium hexametaphosphate from technical phosphoric acid,** by M. Balcseva and I. Banyai. ("Magyar Kémiai Folyóirat" — Hungarian Journal of Chemistry — Vol. 56, No. 5, pp. 201 — 203, May 1950.)

Technical phosphoric acid, which does not contain free sulfuric acid and possibly little monocalciumphosphate, was carefully neutralized to pH 1.2 with sodium carbonate. The greater portion of the calcium, iron and aluminium impurities precipitated during this treatment. Vanadium did not precipitate in laboratory experiments. In large scale operations, however, the precipitate also absorbed vanadium. Monosodiumphosphate was not crystallized from the obtained filtered solutions, but gradually evaporated to dryness and brought to red heat. This method has the advantage that the impurities can be precipitated during evaporation and be removed by a second filtration at about a 50 Bau degree concentration. The evaporation was performed in a lead container, the glowing in an ordinary fire clay [illegible]. The obtained sodium hexametaphosphate was [illegible], or slightly greenish when traces of vanadium were present. It showed all the characteristic reactions.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALIEANU, G.; NASTASEANU, S.

Upper Paleozoic horizons of the Ciudanovita-Lupac (Banat) region. p. 135.

ANALELE SERIA STINTELOR NATURII. Bucuresti, Rumania. Vol. 7, no. 18, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 9, Sept., 1959.

Uncl.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

3(5) PHASE I BOOK EXPLOITATION SOV/2445

Lietuvos TSR mokslu akademija. Geologijos ir geografijos institutas
Geografinis metraštis, I (The Geographical Yearbook I) Vilnius, 1958. 401 p.
Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Lietuvos TSR geografine draugija.

Editorial Board: A. Baublys, K. Bieliunas, Editor-in-Chief (President), V. Chomenis (Vice President), V. Dudelis (Vice President), K. Kaušyla, Managing Ed. (Secretary), S. Marcelyte, and S. Tarvydas.

PURPOSE: This book is intended for geographers and for the general reader interested in the geography of Lithuania.

COVERAGE: The first volume of the Geographical Yearbook presents articles by 22 authors covering aspects of the climatology, geomorphology, geology of the Quaternary, limnology, economic geography, etc. of Lithuania. The publication also includes a section devoted to book reviews and a chronicle of scientific events. Articles appear in Lithuanian with English and Russian resumes. References accompany each article.

Chomenis, V. Studies of the Lithuanian Geographical Environment and the History of Its Mapping 71

Bieliunas, K. Mathematical Foundations of the Major Indices in Lake Morphometry 79

Skyra, S. Problems in Studying the Natural Radioactivity of the Atmosphere 125

Dudelis, V. Some Problems in the Stratigraphy and Paleogeography of the Late Quaternary in Europe and Northern America According to New Data 145

Baublys, A. Morphogenetic Diagnosis of Slopes 177

Petrulis, L. Graphical Method of Systematizing the Chemical Analyses of Water on the Basis of Borehole Tests 191

Baliene, J. and A. Tyliene. Thunderstorms in the Lithuanian SSR and in the Kaliningrad District 205

Bas, A. Determination of Vertical Movements in the Free Atmosphere According to the Data of Wind Velocity Soundings in a Single Station 213

Bezuglov, A. Ice-clogging Floods in the Nemunas River and the Construction of the Kaunas Hydroelectric Power Plant 221

Brazauskas, V. Economic Importance of Lakes and Rivers in Eastern Lithuania 239

Baginskas, A. Soil Erosion in the Highlands of Eastern Lithuania 253

Brazauskas, V. The Problem of Transformation and Expedient Utilization of Tillable Land in Eastern Lithuania 269

Belay, I. Some Peculiarities of Physical Geography of the Daugava, Nemunas and Preglius River Mouths 281

Galvydyte, D. Preliminary Data on Glacial Lake Basins and Their Terraces in the Zemaitija Highlands 297

Mions, L. Relief of the Marginal Zone of the Last Glaciation, as Seen in the Vilnia River Basin 309

Marcinkus, V., and O. Kondratiene. Some New Data on the Interglacial Karst Phenomena of Northern Lithuania 321

Kondratas, A. Mineral Springs in Southern Lithuania 329

Zaiba, J. Materials for the Study of the Upper Devonian Pelecypoda in Lithuania 353

Chronicle 393

List of Members of the Geographical Society of the Lithuanian SSR 397

Address of the Geographical Society of the Lithuanian SSR 403

Publications of the Geological and Geographical Institute of the Academy of Sciences of the Lithuanian SSR 404

AVAILABLE: Library of Congress (G1.G3L35)

(17)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALIS, Zdenek

(3)

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: MD

Affiliation: Clinic of Surgery, Faculty of Medical Hygiene KU /Karlova univerzita; Charles University/ (Chirurgicka klinika lekarske fakulty hygienicke KU), Prague 10; Director: Prof E. POLAK, MD.

Source: Prague, Praktiecky Lekar, Vol 41, No 9, 1961, pp 387-391.

Data: "Relapsing Nephrolitiasis."

Authors: VACH, Bohumil

RALIS, Zdenek

360

GPO 981643

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

SIRBILADZE, N.Ya.; RALISHVILI, L.T.; DROZDOVA, Ye.; MYL'NIKOVA, T.A.; KARCHKHADZE, R.G.

Production of pyrogen-free antidiphtheria and antitetanus therapeutic sera. Nauch. osn. proizv. bakt. prep. 10:196-205 '61. (MIRA 18:7)

1. Tbilisskiy institut vaktsin i syvorotok.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALJEVIĆ

Ralićević, S. Sur certaines classes de polynômes et sur la répartition de leurs zéros. Srpska Akad. Nauka. Zb. Rad. 50, Mat. Inst. 5 (1956), 1–60. (Serbo-Croatian. French summary)

L'objet de ce travail est l'interprétation géométrique des transformations linéaires (affines) effectuées dans les polynômes de la forme

$$(*) \qquad \sum_{k=0}^{\nu} \frac{n}{n-k}\binom{n-k}{k}(-p^2)^k z^{n-2k}+q, \quad \nu=[n/2],$$

et en particulier la répartition des zéros des polynômes transformés ainsi obtenus. Par des considérations géométriques élémentaires, l'auteur établit que la construction des zéros des polynômes transformés se déduit avec la même précision que celle des polynômes réguliers correspondants aux (*). La démonstration d'une suite de résultats de ce genre repose sur la notion et les propriétés de "l'écart" d'un polynôme $P_n(x)$ défini par

$$R=\max|P_n(\zeta_\nu)|-\min|P_n(\zeta_\nu)|, \quad P_n'(\zeta_\nu)=0 \quad (\nu=1, 2, \cdots, n-1).$$

M. Tomić (Beograd).

CG 1/1

On a Certain Class of Polynomials and on the Distribution of their Zeros.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALIK, Josef, MUDr; URBANOVA, Slavomira, MUDr

Glycaemic curve in patients with keratoconjunctivitis sicca. Cesk. ofth. 10 no.5:321-325 Oct 54.

1. Z I. ocni kliniky Karlovy university v Praze. Prednosta doc. Dr. E.Dienstbier

(KERATOCONJUNCTIVITIS
sicca, glucose in)
(GLUCOSE TOLERANCE TEST, in various diseases
keratoconjunctivitis sicca)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALIN, E. M.
N. V. BELOV, Russ. 35,320, Mar. 31, 1934

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALITSKAYA, S. I.

"The Clinical Treatment of Atypical Mastoiditis." Cand Med Sci, First Moscow Order of Lenin Medical Inst, 1 Nov 54. (VM, 20 Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Eductional Institutions (10)

SO: Sum. No. 481, 5 May 55

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALIZIN, G. S.

G. S. Ralizin, "On Some Applications of Matrix Algebra to the Theory of Mechanisms."

paper presented at the 2nd All-Union Conf. on Fundamental Problems in the Theory of Machines and Mechanisms, Moscow, USSR, 24-28 March 1958.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RILJAVIC, A.

Correction to the work "A Straight and a Characteristic Segment in Polygons with Zeros of Polynomials." p. 144.
ZBORNIK RADOVA, Beograd, No. 43, 1955.

SO: Monthly List of East European Accessions, (EEIL), LC, Vol. 4, No. 10, Oct. 1955, Uncl.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Raljević, Š. Sur certaines classes de polynômes et sur la répartition de leurs zéros. Srpska Akad. Nauka. Zb. Rad. 50, Mat. Inst. 5 (1956), 1-60. (Serbo-Croatian. French summary)

L'objet de ce travail est l'interprétation géométrique des transformations linéaires (affines) effectuées dans les polynômes de la forme

$$(*) \qquad \sum_{k=0}^{\nu} \frac{n}{n-k} \binom{n-k}{k} (-p^2)^k z^{n-2k} + q, \quad \nu = [n/2],$$

et en particulier la répartition des zéros des polynômes transformés ainsi obtenus. Par des considérations géométriques élémentaires, l'auteur établit que la construction des zéros des polynômes transformés se déduit avec la même précision que celle des polynômes réguliers correspondants aux (*). La démonstration d'une suite de résultats de ce genre repose sur la notion et les propriétés de "l'écart" d'un polynôme $P_n(x)$ défini par

$$R = \max|P_n(\zeta_\nu)| - \min|P_n(\zeta_\nu)|, \quad P_n'(\zeta_\nu) = 0$$
$$(\nu = 1, 2, \cdots, n-1).$$

M. Tomić (Beograd).

On a Certain Class of Polynomials and on the Distribution of their Zeros.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

2

Raljević, Š. Remarque sur un théorème de M. Marden. Srpska Akad. Nauka. Zb. Rad. 55, Mat. Inst. 6 (1957), 69–72. (Serbo-Croatian. French summary) 16

This note shows by example that Theorem (44.1) is incorrect as stated in the reviewer's "The geometry of the zeros of a polynomial in a complex variable", Math. Surveys, no. 3, Amer. Math. Soc., N.Y., 1949 [MR 11, 101], p. 157. As the reviewer has known for some time, the statement in the theorem "$f(z)$ has $n-k$ zeros on the unit circle" should read "$f(z)$ has $n-k$ zeros on or symmetric in the unit circle". The other zeros mentioned in the theorem are in addition to these zeros. See also F. F. Bonsall and M. Marden, Proc. Amer. Math. Soc. 3 (1952), 471–475; 5 (1954), 111–114 [MR 13, 938; 15, 613].

M. Marden (Milwaukee, Wis.)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALJEVIC, S.

SCIENCE

Periodical: ZBORNIK RADOVA. No. 55, 1957.

RALJEVIC, S. A remark on a Marden's theorem. p. 69.

Monthly List of East European Accessions (EEAI) LC, Vol. 6, no. 3
March 1957 Unclass.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

[illegible], [illegible].

"A Generalization of [illegible]'s Vector and [illegible]" [illegible]
([illegible], Series [illegible], v. [illegible], no. [illegible], [illegible],
Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2,
No. 10, October, [illegible], Unclassified

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKO, A.V.

Kinetics of firing processes. Inzh.-fiz.zhur. no.5:12-16 My '60. (MIRA 13:8)

1. Ordena V.I.Lenina politekhnicheskiy institut, Kiyev.
(Ceramics)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKO, A.V.

USSR/Atomic and Molecular Physics - Heat D-4

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 768

Author : Ralko, A.V.
Inst : -
Title : Analysis of Investigations of Non-Stationary Heat Exchange and Mass Exchange in Phase Transformations and in Chemical Transformations.

Orig Pub : Tr. mosk. tekhnol. in-t pishch. prom- sti, 1957, vyp. 8, 215-219

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

S/170/60/003/005/002/017
B012/B056

/c

AUTHOR: Ralko, A. V.

TITLE: The Kinetics of Baking Processes

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 5, pp. 12 - 16

TEXT: With a view to working out methods for the purpose of automatically obtaining optimum curves for clay-baking, the author experimentally investigated the kinetics of clay-baking. In a paper (Ref. 2), the author described a method in which three differential thermocouples were distributed over the experimental sample. This made it possible, by mathematical evaluation of the experimental thermograms obtained, to determine the quantitative thermophysical characteristics and the thermal effects of the investigated mineral (Ref. 3). Fig. 1 shows three thermograms which were obtained when baking Prosyanaya kaolin. The thermograms were recorded according to the above method by an electronic multipoint potentiometer. These experimental data show that the chemical transformations in the heating of a body first take place in its surface

Card 1/3

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

layer (zone of chemical reactions). Later, the zone of chemical transformations gradually shifts into the depth of the body. The calculations dealt with here confirm the mechanism of the gradual deepening of the zone of chemical reactions in the capillary-porous body. The zone of chemical reactions gradually shifts into the interior according to the parabolic law, which agrees with the Stefan theorem on the "freezing-through" of moist bodies. The rapid increase of the temperature gradient during the shifting of the zone of the endothermic effect causes thermal stresses in the sample, which may lead to the destruction of the material. An artificial slowing down of the development of the endothermic effect at a given temperature gradient on the boundary of chemical transformations in workpieces can be attained only by a corresponding decrease of the heat supply from outside during baking. Fig. 2 shows the circuit diagram of the experimental arrangement which is described. The experiments are briefly described, and Fig. 3 shows the curves obtained in the baking of clay plates having a thickness of 20 mm when heated to a temperature of 900°C. These curves distinctly show the endothermic effect in kaolin. By means of the method shown here for the determination of baking-curves, optimum modes of operation in the baking of workpieces

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

The Kinetics of Baking Processes

S/170/60/003/005/002/017
B012/B056

from various ceramic materials may be determined. The nature of the method consists in the fact that the electronic controller automatically brings about the necessary furnace conditions by means of a prescribed mode of operation necessary for the respective sample and material. This means that it forms the optimum curve for baking. There are 3 figures and 5 Soviet references.

ASSOCIATION: Ordena V. I. Lenina politekhnicheskiy institut, g. Kiyev ("Order of V. I. Lenin" Polytechnic Institute, Kiev)

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKO, A. V.

" Study of heat - and mass- exchange in a process of roasting clays and kaolins."

Report presented at the 1st All-Union Conference On Heat- and Mass Exchange, Minsk, BSSR, 5-9 June 1961

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKO, A. V.

Experimental Investigation of Unsteady Heat- and Mass-Transfer During Phase and Chemical Transformations

Akademiya nauk SSSR. Energeticheskiy institut
Teplo- i massoobmen v protsessakh ispareniya (Heat- and Mass-Transfer in Evaporation Processes) Moscow, Izd-vo AN SSSR, 1958. 254p. 5,000 copies printed.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAL'KO, A. V.; KURSENKO, I.

"Thermodynamics of irreversible heat and mass transfer as a scientific method for studying the kinetics of the firing of silicates and silicate articles."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Kiev Polytechnic Inst

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKO, A.V.

Analysis of studies on unstable heat and mass transfer in phase and chemical transformations. Trudy MTIPP no.8:215-219 '57. (MIRA 10:12)

(Mass transfer) (Heat--Transmission)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RAIKO, A. V.

RAIKO, A. V. --"Experimental Investigation of Nonstationary Heat and Mass Exchange during Phase and Chemical Conversion." Min of Higher Education USSR, Moscow Technological Inst of Food Industry, Moscow, 1956 (Dissertation for the degree of Doctor of Technical Sciences.)

KNIZHNAY LETOPIS
No 41, October 1956

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKO, A. V.

"Investigation of Heat and Mass Transfer at the Process of Baking of Clays and Caolins."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

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RAL'KO, V.A., Geroy Sotsialisticheskogo Truda; LOBANOV, A.P.; KURLYPO, M.F.; YANUSHEVSKAYA, M.S.; FEDOTKINA, A.I.

Introducing scientific farm management on the "Stalin" Collective Farm. Zemledelie 7 no.8:6-11 Ag '59. (MIRA 12:10)

1.Predsedatel' kolkhoza imeni Stalina, Pinskogo rayona, Brestskoy oblasti (for Ral'ko). 2.Nauchno-issledovatel'skiy institut ekonomiki i organizatsii sel'skokhozyaystvennogo proizvodstva Akademii sel'skokhozyaystvennykh nauk BSSR (for Lobanov, Kurlypo, Yanushevskaya). 3.Belorusskiy nauchno-issledovatel'skiy institut zhivotnovodstva (for Fedotkina).
(White Russia--Collective farms)

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CHUMAKOV, Yu.I.; LEBOVSKIKH, V.M.; LOKHOV, K.Ye.; RALKO, V.A.

1,3-di-(2-pyridyl)propane. Metod.poluch.khim.reak. i prepar. no.7: 56-57 '63. (MIRA 17:4)

1. Kiyevskiy politekhnicheskiy institut.

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BAKANOV, A.; BAL'KOV, V.

Small-size moistening apparatus with automatic feeding of water. Muk.-elev. prom. 29 no.12:20-21 D '63. (MIRA 17:3)

1. Nachal'nik razmol'nogo tsekha Tul'skogo mel'nichnogo kombinata No.1 (for Bakanov). 2. Zamestitel' nachal'nika razmol'nogo tsekha Tul'skogo mel'nichnogo kombinata No.1 (for Bal'kov).

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RAL'KO, V.A., Gerey Sotsialisticheskogo Truda

Land has become more generous. Zemledelie 27 no.11:75-78 N '65. (MIRA 18:10)

1. Predsedatel' kolkhoza "Osnezhitskiy", Pinskogo rayona, Brestskoy oblasti.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, Jarmila

Diffusion of radioisotopes in glass. Silikaty 6 no.3:258-272 '62.

1. Ustav jaderneho vyzkumu, Rez u Prahy.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, Jarmila

Measurement of radioactivity in water. Jaderna energie 6 no.3:89-93 Mr '60.

1. Ustav jaderneho vyzkumu, Praha.

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4C

L 33603-65 EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR Pr-4/Ps-4/Pu-4

ACCESSION NR: AP5009492 Z/0038/65/000/001/0009/0011 32 B

AUTHOR: Berak, Lubomir; Dlouhy, Zdenek (Dlougi, Z.); Kepak, Frantisek; Napravnik, Jiri (Napravnik, Y.); Ralkova, Jarmila (Ralkova, Ya.); Saidl, Jaroslav (Saidl, Ya.); Schejbalova, Ludmila (Sheybalova, L.); Vesely, Vladimir (Vesel', V.); Zaruba, Josef (Zaruba, Y.)

TITLE: Problems of radioactive wastes 19 being solved in the Institute of Nuclear Research of the Czechoslovak Academy of Sciences

SOURCE: Jaderna energie, no. 1, 1965, 9-11

TOPIC TAGS: radioactive waste disposal, radioactive waste disposal equipment

ABSTRACT: Investigations of radioactive waste disposal are reviewed. Some methods developed and proved are briefly described. Several of them became a basis for pilot plant and full operation equipment design and construction. Orig. art. has: 3 figures.

ASSOCIATION: Ustav jaderneho vyzkumu CSAV, Rez (Institute for Nuclear Research, CSAV)

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 017 NA

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BALEK, Jarmila, Inz. CSc.; RALKOVA, Jarmila, Dr. CSc.; SLUNECKO, Jaroslav, Inz.

Use of isotopes for hydrologic measurements. Vodni hosp 15 no.4: 145-147 '65.

1. Institute of Hydrodynamics of the Czechoslovak Academy of Sciences, Prague, and Institute of Nuclear Research of the Czechoslovak Academy of Sciences, Rez.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

22363
Z/038/61/000/001/004/005
A201/A126

21.5300

AUTHORS: Rálková, Jarmila and Slunečko, Jaroslav

TITLE: Measurement of low activities in waters. III. Design of a cell-type counter

PERIODICAL: Jaderná energie, no. 1, 1961, 13 - 15

TEXT: The article describes the improvements made in a cell-type scintillation counter described by the same authors in a previous article. The counter was developed at the Ústav jaderného výzkumu ČSAV (Institute of Nuclear Research, ČSAV) and has been used for some time for the measurement of waste-water activity at the nuclear reactor in Řež. The first major improvement concerns the cell design. The original flat cell, which was made entirely of scintillation material with a volume of 2 milliliters, was replaced by a larger cell with a volume of 20 milliliters. Its walls are of polished plexiglas and inside the cell, thin, polyvinyl-toluene-base plastic scintillator plates, produced by Tesla Liberec, are mounted at 1 mm intervals parallel to the axis of two photomultipliers, as shown in Figure 1. This arrangement has the following advantages: The self-absorption in the sample is reduced; the geometric efficiency is as high as 94%; the back-

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Measurement of low activities ... Z/038/61/000/001/004/005
A201/A126

ground is reduced to 0.8 count/min due to the reduced total mass of the scintillation material; and larger samples can be measured. The new design of the cell has improved the measuring efficiency by a 1.5 order of magnitude so that activities as low as 5×10^{-11} c/liter can be measured without previous thickening. With tenfold thickening, water samples of a specific activity of 5×10^{-12} c/liter can be measured, which is in compliance with the Czechoslovak standard ČSN 567900 for drinking water. The cell is inserted into two plexiglas lightpipes connected optically with two US-made RCA 6342 photomultipliers. The wiring diagram of the high-voltage divider and cathode follower is shown in Figure 2. Positive high voltage is tapped separately for each photomultiplier from two Tesla scintillation detectors. The photocathode is grounded. Scintillation pulses are taken from the last dynode. Output pulses are fed through a shielded cable to amplifiers which are built-in in the Tesla detectors. The three-stage amplifiers have an input sensitivity of 20, 80, or 300 mv. Output pulses are positive with a height of 25-30 v. These shaped pulses are fed into the coincidence circuit. The coincidence circuit has a resolution time of 10^{-7} sec and was designed by the elektronické oddělení ÚJV (Electronics Section, ÚJV). It eliminates all noise pulses generated in the photomultipliers and lets pass through only pulses which were detected by both photomultipliers simultaneously. The pulses from the coincidence circuit are

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A201/A126

Measurement of low activities ...

positive, have a height of 10 v and a duration of 0.5 microseconds. They are then fed to the anticoincidence circuit. The anticoincidence shielding of the scintillation counter is formed by a double ring of STS 8 GM tubes, and its purpose is to reduce the background due to cosmic rays. If a cosmic particle still penetrates through the GM-tube ring and reaches the scintillator, the produced scintillation pulses are detected by both photomultipliers simultaneously so that they pass through the coincidence circuit and have to be separated from pulses produced by the radiation of the sample. This is done by a special anticoincidence circuit the wiring diagram of which is shown in Figure 3, and which constitutes the second major improvement. The anticoincidence function proper is performed by the gating circuit E3E4. Before entering the gating circuit, pulses are shaped by shaping circuits. Output pulses from the coincidence circuit are fed over input Sc and trigger the monostable flip-flop circuit E1E2 formed by the double triode ECC85. The generated, negative, square pulses with a height of about 40 v and a duration of 25 μ sec are derived by the CR circuit so that two short pulses, one negative and one positive, are obtained. The positive pulse is delayed by about 25 μ sec and has a duration of 1.5 μ sec. The GM-pulses are negative, of longer duration and a slow build-up time. They are fed over the input GM to the amplifying stage E5 with a reduced anode voltage and short transfer characteristic.

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Measurement of low activities ...

Thus, positive pulses with a steep leading edge are obtained in the anode circuit of the triode. These pulses are then further derived by the derivating circuit CR and their positive peaks trigger the monostable flip-flop circuit E7E8 formed by the double triode ECC85, while the negative peaks are clipped by the germanium diode 4NN41. From the flip-flop circuit, rectangular pulses with a height of about 15 v and a duration of 35 μsec are fed to the grid of the triode E4 of the gating circuit. The gating circuit E3E4 is formed by the double triode ECC85. Both triodes have a common resistance of 4 kΩ. The triode E4 is opened by grid bias tapped from a 160 kΩ and a 6.4 kΩ voltage divider. A current flows through this vacuum tube and the cathode resistance causing a voltage drop of about 30 v so that the triode E3 is closed. Shaped pulses from the input Sc are fed to the control grid of the triode E3. Only a delayed positive pulse with a height of 35 v opens this vacuum tube. The amplified voltage pulse is tapped from the 20 kΩ anode resistance and power-amplified by the cathode follower E5. The output pulses are negative, with a height of 40 v and a duration of 1.5 μsec. When a shaped GM pulse is fed to the grid of the triode E4 of the gating circuit E3E4, the voltage rises on the cathode resistance of 4 kΩ from 30 to about 45 v, since the triode E4 is connected as cathode follower. The triode E3 remains closed so that none of these pulses can appear on the output circuit of the instrument. When a pulse from

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the input Sc (40 v, 1.5 μ sec, delayed by 25 μ sec) appears on the grid of the triode E3 at a time when on the grid of the triode E4 there is still a GM pulse (15 v, 35 μ sec), this pulse is stopped by the gating circuit since its height is not sufficient to open the triode E3 at which the bias has just been increased to 45 v. Thus it is ensured that pulses which were produced simultaneously in GM tubes and the scintillator are separated from pulses produced in the scintillator alone. The instrument in this arrangement has proved to be successful in operating conditions. Appreciation is extended to Václav Veselý for drawing the diagrams and assisting in building the instrument. There are 3 figures and 2 Soviet-bloc references.

ASSOCIATION: Ústav jaderného výzkumu ČSAV (Institute of Nuclear Research), Prague

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

84639

Z/038/60/000/007/003/006
A201/A026

26,2246

AUTHORS: Rálková, Jarmila; Sluněčko, Jaroslav

TITLE: Low-Activity Measurements in Waters. II. The Design of a Cell Counter

PERIODICAL: Jaderná energie, 1960, No. 7, pp. 235 - 237

TEXT: The Ústav jaderného výzkumu ČSAV (Institute of Nuclear Research, ČSAV) developed a cell-type scintillation counter for measuring low-level β - activity in liquids. It consists of a flat cell, made of hydrophobic plastic scintillator, mounted between two photomultiplier tubes in coincidence connection, as shown in Figure 1. This assembly is surrounded by a ring of STS 8 G M tubes, as shown in Figure 2, which are connected in anticoincidence relative to the scintillation counter. This anticoincidence envelope absorbs cosmic radiation thus reducing the natural background of the counter. The entire assembly is enclosed in a 10-cm lead shield to keep off external γ -radiation. High-tension voltage for the photomultipliers is supplied from a source similar to that used in Tesla scintillation counters, with a built-in three-stage amplifier of input sensitivities 0.02, 0.08 and 0.3 v. Since the pulses from the photomultipliers have a height of about 100 mv, an input sensitivity of 0.08 v is quite adequate.

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A201/A026

Low-Activity Measurements in Waters. II. The Design of a Cell Counter

Output pulses have heights between 25 and 30 v, the amplifier stability being 0.1% at ± 10% grid-voltage changes. The coincidence circuit was designed by the elektronické oddělení ÚJV (Electronics Section, ÚJV). Power for GM tubes and cathode followers is supplied from a stabilized Tesla RS 275 power source. The decade scaler was produced by the Leninovy závody (Lenin Works) in Plzeň. US RCA 6342 photomultipliers were used, but Czech or Soviet photomultipliers can be used, too. A special anticoincidence circuit was designed for this counter by the Institute of Nuclear Research. Its main part is a gating circuit which has to meet the following requirements: 1) To let pass all scintillation pulses, which passed the coincidence circuit and did not originate simultaneously with any of the GM tube pulses. 2) To arrest those scintillation pulses which originated simultaneously with some of the GM tube pulses. 3) To arrest all pulses which originated in the GM tubes. Prior to entering the gating circuit, the GM tube pulses are shaped to a rectangular pattern and the scintillation pulses are delayed in such a manner that both pulse types, if they originated simultaneously, meet at the gating-circuit input. This prevents pulses, caused in the scintillator by a cosmic particle, from appearing at the output of the apparatus.

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A201/A026

Low-Activity Measurements in Waters. II. The Design of a Cell Counter

The block-schematic of the apparatus is shown in Figure 3. The apparatus has a background of 2 - 3 pulses/min (with a 10-cm lead shield). Its geometry-efficiency is 80% with a cell having inside dimensions of 20 x 30 x 3 mm. The activity of several samples of the Vltava River water, the potable water from the municipal water system and reactor water was measured and the results compared to data obtained by GM counters, as shown in Table 1. It was found that the cell-type scintillation counter makes possible direct measurements of liquids with a specific activity $\sim 10^6 \mu c/ml$, with an error of $\pm$ 12%. The liquid measured must not attack the scintillation material and has to be transparent to blue and green light. When larger quantities of sample liquids are condensed, even liquids with lower activities can be measured, down to $10^{-9} \mu c/ml$ (reactor water) with a maximum error of $\pm$ 30%. Measuring time is 1 hour for samples yielding less than 5 pulses/min, and 30 minutes for samples yielding higher counts. Background is measured during 1 hour prior to and after sample measuring. The measuring efficiency of the counter can be further increased by modification of the cell. Experiments are being conducted with a cell composed of several plastic scintillator plates spaced 1 mm apart parallel to the axis of the photomultipliers. The

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A201/A026

Low-Activity Measurements in Waters. II. The Design of a Cell Counter

geometry-efficiency of this cell is 94%. Scintillation pulses are led to photocathodes so that even opaque liquids can be measured. Preliminary calculations indicate that activity of river and potable water as low as 10^{-9} μ c/ml can be detected. Credit is given to Doctor J. Juna for his suggestions and V. Veselý and M. Petrán for their help in building the counter and sample preparation. There are 2 photographs, 1 figure, 1 table, and 11 references: 2 Czech, 8 English and 1 German. (Edited by I. Bučina and J. Juna).

ASSOCIATION: Ústav jaderného výzkumu ČSAV, Praha (Institute of Nuclear Research, ČSAV, Prague)

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Z/012/62/000/003/001/001
E073/E335

Diffusion of ....

500	1.7×10^{-11}
550	2.5×10^{-11}
600	2.9×10^{-11} .

The values for strontium in the temperature range 350 - 575 °C were:

350	3.07×10^{-13}
400	5.10×10^{-13}
450	1.95×10^{-12}
500	1.26×10^{-11}
525	1.73×10^{-11}
550	1.89×10^{-11}
575	2.20×10^{-11} ,

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Diffusion of ....

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E073/E335

The activation energy of diffusion changes with temperature and this is in accordance with the hypothesis on the activation of the glass structure. The diffusion coefficients of caesium are lower than those of other alkalis with smaller ionic diameters. However, the activation energy of diffusion of Cs is lower than that of sodium and this is considered proof of the assumption that caesium is the most weakly bound element in glass. Caesium migrates faster than strontium at lower temperatures, due to the fact that in this range fusion is affected by the valency of the ions. In the region of softening of the glass the diffusion coefficients of mono- and bivalent ions become approximately equal. The low values of the diffusion coefficients indicate that the sealing of highly radioactive elements into glass would be safe provided the rate of elution were limited solely by diffusion. Results of earlier elution tests with fused basalt indicate that in the initial stage the surface layers are flushed and eluted and even dissolved at a rate higher by several orders of magnitude than that corresponding to diffusion. Later on, the elution factors are of an

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E073/E335

Diffusion of ....

order of magnitude comparable with that of the diffusion coefficients. Further work is scheduled on the diffusion of ions in types of fused basalt which are considered to be chemically most stable and economically most favourable.
There are 8 figures and 7 tables.

ASSOCIATION: Ústav jaderného výzkumu, Řež u Prahy (Institute of Nuclear Research, Řež, Prague)

SUBMITTED: August 28, 1961

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, Jarmila; SLUNECKO, Jaroslav

Low activity measurement in waters. Part 2: The design of a cell counter. Jaderna energie 6 no.7:235-238 Jl '60.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Praha

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALKOVA, Jarmila

Low activity measurement in water; part 4. Jaderna energie 7 no.11: 374-377 N '61.

1. Ustav jaderneho vyzkumu, Praha.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

BALKOVA, Jarmila; SAIDL, Jaroslav

Incorporation of radioisotopes into melted silicates.
Jaderna energie 10 no.1:14-18 Ja'64.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez.

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31923
Z/038/62/000/002/004/004
D286/D303

21.5140

AUTHOR: Rálková, Jarmila

TITLE: Radioisotope diffusion in glass

PERIODICAL: Jaderná energie, no. 2, 1962, 56-57

TEXT: This is an abstract of the 17-page Report No. 540 (12 May 61) of the ÚJV (Nuclear Research Institute). The report, intended as contribution to solving problems encountered in radioactive waste disposal, investigates the diffusion of Cs^{134} and Sr^{90} in glass at 300 - 600°C. The radioisotopes were spread on thin glass plates, the plates were heated, and beta energies were measured on both sides of the plate. The calculated diffusion coefficients ranged from $D = 10^{-13}$ to 10^{-11} cm^2/sec^{-1}. The changes of the diffusion activation energy in dependence of time are in agreement with the hypothesis of glass-lattice activation. The assumption that Cs is the alkali metal with the weakest bond to glass could be confirmed. It was also found that diffusion coefficients of Cs and Sr

X

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Z/038/62/000/002/004/006
D286/D303

Radioisotope diffusion in glass

differ only slightly at lower temperatures (glass softening), but greatly at higher temperatures (575°C) which, in turn, confirms the Blau theory stating that fields of force, i.e. ion valences, are the primary factor in diffusion processes. It is finally stated that measured diffusion coefficients permit the assumption that highly-active waste may safely be fixed in glass. There are 7 figures in the original report.

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X

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RÁLKOVÁ, JARMILA

CH

The polarographic reduction of formaldehyde in the mixture ethanol-water. Jarmila Rálková (Charles Univ., Prague). *Chem. Zvesti* 9, 409-15(1955).—The kinetic wave of reduction of CHOH in buffered aq. solns. of EtOH was studied. The presence of EtOH decreased considerably the height of the limiting current which could be explained by the decrease of flow of free reducible aldehyde form of EtOH to the electrode. Jan Micka

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ACC NR: AR6034095 (A) SOURCE CODE: UR/0089/66/021/004/0285/0289

AUTHOR: Saidl, Yaroslav; Ralkova, Yarmila

ORG: Institute of Nuclear Research, Czechoslovak Academy of Sciences, Řež near Prague, Czechoslovakia (Institut yadernykh issledovaniy Chekhoslovatskoy akademii nauk, Rzhezh ná Pragoy, Chekhoslovakia)

TITLE: Solidifaction of radioactive waste by fusing into basalt

SOURCE: Atomnaya energiya, v. 21, no. 4, 1966, 285-289

TOPIC TAGS: radioactive waste disposal, silicon compound, mineral, radiation shielding, physical diffusion

ABSTRACT: With an aim at finding means of isolating highly radioactive products from the biosphere, the authors first review earlier similar work done in Czechoslovakia on the incorporation of various mixtures of fission products in materials with a silicon base. Basalt was chosen because of its chemical stability and mechanical strength, hydrolytic stability and high melting temperature, as well as great abundance in Czechoslovakia. Brief reports are presented on the effect of impurities on basalt, of tests of its radiation endurance, and on the volatility of radioactive isotopes from it. Tests have shown that recrystallization of the vitreous phase of fused basalt improves its properties, primarily its mechanical and chemical endurance. At temperatures 30 - 70C, the calculated diffusion coefficients range from 10^{-15} - 10^{-17} cm^2/sec. It is concluded that fused basalt satisfies all requirements imposed on materials used for safe and economic isolation of radioactive waste with large

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ACC NR: AP6034095

specific activity. Orig. art. has: 1 figure and 1 table.

SUB CODE: 18/ SUBM DATE: 25Apr66/ ORIG REF: 006/ OTH REF: 011

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

ACC NR:AP6021984 (A,N) SOURCE CODE: UR/0375/66/000/004/0020/0026

AUTHOR: Pirumov, V. S. (Captain 2d Rank); Rall', D. S. (Engineer; Captain 1st Rank; Candidate of Naval Sciences); Trukhayev, R. I. (Engineer)

ORG: None

TITLE: Decision making theory and the control of forces

SOURCE: Morskoy sbornik, no. 4, 1966, 20-26

TOPIC TAGS: operations research, military personnel, cybernetics, command and control system, electronic computer, NAVAL FORCE ORGANIZATION

ABSTRACT: The application of cybernetics to the theory of command decisions from the naval viewpoint is discussed. The decision-making process is broken down into four stages: (1) the formation of an approximate qualitative model; (2) the formalization of the assigned mission; (3) formal optimization; (4) and creative optimization, the last stage prior to the decision itself. The third stage is the most complex, and involves a quantitative optimization of a formal constituent on the basis of an elucidation of the nature and volume of the parameters characterizing the knowledge of the elements of the situation. Levels of knowledge of situation parameters are distinguished and strategic level is examined in somewhat more detail. An example of the application of the theory is given, and it is

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ACC NR: AP6021984

pointed out that the sequence of the process as shown can serve as the basis for further improvement of the command structure and points the way to a degree of possible interaction between personnel and electronic computers in an automated command system. Orig. art. has: 1 table.

SUB CODE: 05,12/SUBM DATE: None

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RALL', D.S., kand. voyenno-morsk. nauk, dotsent, inzh.-kapitan 1-go ranga;
TRUKHAYEV, R.I.

Dynamic programming and certain fields of its use. Mor. sbor. 48 no.11:
21-29 N '64. (MIRA 18:1)

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RALL', D.S., kand. voyenno-morskikh nauk, inzh.-kapitan 1-go ranga; NIKITIN, I.M., inzh.-kapitan 2-go ranga; TRUZHAYEV, R.I.

Using the game method for making an optimal decision under conditions of uncertainty. Mor. sbor. 47 no.3:27-35 Mr '64. (MIRA 18:7)

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RALL, J.M.

Are there intelligent beings in the universe? Elet tud 16 no.27:840-842 2 Jl '61.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

BALL, K.B.; PEREKALIN, V.V.

Reaction of diketenes with some aromatic hydroxy compounds. Zhur. Priklad. Khim. 25, 1330-5 '52. (MLRA 5:12)
(CA 47 no.21:11155 '53)

1. A.I. Gertsen State Pedagog. Inst., Leningrad.

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RALL', K. B.

"Reaction of Diketene With Some Aromatic Oxy-Compounds." Cand Chem Sci, Leningrad State Pedagogical Inst, Leningrad, 1954. (RZhKhim, No 21, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALL, K. B.

Reactions of diketene. III. Reaction of diketene with some aromatic hydroxy compounds. Synthesis of phenyl acetoacetates. K. B. Rall and V. V. Perekalin (A. I. Gertsen Pedagogical Inst., Leningrad). *Zhur. Obshchei Khim.* 25, 276-81; *J. Gen. Chem.* (U.S.S.R.) 25, 259-64 (1955)(Engl. translation); cf. *C.A.* 50, 300*h*.—To 4.7 g. PhOH in 30 ml. C_6H_6 was added a little pyridine followed, at −10°, by dropwise addn. of 4.5 g. diketene (I) over 10 min.; after refluxing 1.5 hrs. the mixt. yielded 72.3% *$AcCH_2CO_2Ph$* (II), m. 50°; a 63.9% yield was obtained similarly in Et_2O in the presence of few drops of H_2SO_4. II (1.78 g.) in 100 ml. EtOH and 10 ml. 0.1*N* AcONa was treated with cooling over 2 hrs. with 110 ml. 0.1*N* PhN_2Cl, yielding 61% *PhO_2CCHAc-N:NPh*, yellow, m. 95-6°; this refluxed with 5% HCl gave 86% *$AcCH(CO_2H)N:NPh$*, m. 155°. II in concd. H_2SO_4 gave after 20 hrs. at room temp. a low yield of 4-methylcoumarin, m. 80°. *o*-$MeOC_6H_4OH$ (6.2 g.) in C_6H_6, treated with a little pyridine, followed by 4.5 g. I gave afte. 1.5 hrs. refluxing 68% *o-$MeOC_6H_4O_2CCH_2Ac$*, m. 62-3° (with H_2SO_4 as catalyst the yield was 58.6%); this with PhN_2Cl, as above, gave 83% *o-$MeOC_6H_4O_2CCH(N:NPh)Ac$*, yellow, m. 95-7°. Hydroquinone (3.3 g.) and 2.8 g. I, in C_6H_6 in the presence of pyridine, gave after 2 hrs. at reflux and extn. with hot $CHCl_3$ a 91% yield of *p-$HOC_6H_4O_2CCH_2Ac$*, m. 102°, which is readily hydrolyzed with hot 5% NaOH. The use of an excess of I gave *p-$C_6H_4(O_2CCH_2Ac)_2$* (III), m. 121-2°; the same formed from I and the mono deriv. in 84% yield. III and PhN_2Cl, as above, gave 97% *p-C_6H_4-$(O_2CCHAcN:NPh)_2$*, orange, m. 226-7° (from Ac_2O). *p*-MeC_6H_4OH and I in C_6H_6 with a little pyridine similarly gave 92.5% *p-$MeC_6H_4O_2CCH_2Ac$*, m. 68°. Similarly was obtained 74.5% *p-$BrC_6H_4O_2CCH_2Ac$*, m. 51°. I (0.84 g.) added over 1.5 hrs. to 1.2 g. salicylaldehyde and 0.1 g. dry KOAc at 35-40°, then treated with 5% HCl, gave 33.7% *3-acetylcoumarin*, m. 120-1°. G. M. Kosolapoff

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RALL, K.B.

CH

Reactions of diketene. IV. Reaction of diketene with some aromatic hydroxy compounds. Synthesis of methylcoumarin derivatives. K. B. Rall and V. V. Perekalin (Gertsen Pedagog. Inst., Leningrad). *Zhur. Obshchei Khim.* 25, 815-21; *J. Gen. Chem. U.S.S.R.* 25, 781-6(1955) (Engl. translation); cf. *C.A.* 50, 1704*e*.—In reactions of aromatic HO compds. with diketene (I) basic catalysts aid the formation of acetoacetyl derivs., while acid catalysts aid the formation of coumarins. This is readily explained by different form of polarization of I in the initial stage of reaction. To 5.5 g. resorcinol in 50 ml. Et_2O was added a few drops H_2SO_4 and then over 10 min. at −10° 5 g. I and the mixt. refluxed 2.5 hrs. to give 54.5% *7-hydroxy-4-methylcoumarin*, m. 186-7°. Phloroglucinol similarly gave 88.5% *5,7-dihydroxy-4-methylcoumarin*, m. 236-7°. Pyrogallol gave *7,8-dihydroxy-4-methylcoumarin*, m. 235-6°, while hydroxyhydroquinone gave *6,7-dihydroxy-4-methylcoumarin*, m. 268-9°. To 7.2 g. 1-$C_{10}H_7OH$ in 75 ml. C_6H_6 was added few drops pyridine followed by 4.5 g. I; after refluxing 1.5 hrs. the mixt. gave 77.2% 1-naphthyl acetoacetate (II), m. 72°; this heated with 5% NaOH gave Me_2CO and 1-naphthol. II treated with PhN_2Cl in the presence of NaOAc gave *1-$C_{10}H_7O_2CCHAcN:NPh$*, red, m. 112-15°. I, 1-$C_{10}H_7OH$, and a little H_2SO_4 in Et_2O gave 44.6% *4-methyl-7,8-benzocoumarin*, m. 166-7°, the same forming in 40% yield from II on heating with $AlCl_3$ in $PhNO_2$ 1 hr. at 60°. After 48 hrs. at room temp., 2-$C_{10}H_7OH$, I, and a little pyridine in C_6H_6 gave 79.6% *2-$C_{10}H_7O_2CCH_2Ac$*, m. 82-3°; this heated with 5% NaOH gave 2-$C_{10}H_7OH$; coupling with PhN_2Cl in NaOAc soln. gave 98% orange *2-$C_{10}H_7O_2CCHAcN:NPh$*, m. 132-4°. G. M. K.

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BALL, K. B

New method of preparation of coumarin derivatives. K. B. Ball and V. V. Perekalin (A. I. Gertsen State Pedagog. Inst., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 100, 715-17(1955); cf. *C.A.* 48, 9913*i*.—To 1.2 g. o-HOC_6H_4CHO and 0.1 g. KOAc at 35-40° was added in 1.5 hrs. 0.84 g. diketene, yielding 40.4% *3-acetylcoumarin*, m. 121-2°. Phloroglucinol (0.63 g.) in 50 ml. Et_2O at −10° treated with a little H_2SO_4 and 1 g. diketene and the mixt. refluxed 1.5 hrs. gave 88.5% *5,7-dihydroxy-4-methylcoumarin*, m. 256-7° (from MeOH). 1-$C_{10}H_7OH$ (7.2 g.) in C_6H_6 treated at −10° with a little pyridine and 4.5 g. diketene and refluxed 1.5 hrs. gave 72.6% *1-$C_{10}H_7O_2CCH_2Ac$* (I), m. 72°. The same mixt. (with a little H_2SO_4 instead of pyridine) refluxed 2.5 hrs. gave 44.6% *4-methyl-7,8-benzocoumarin*, m. 167-8°, also formed in 40% yield from 1.14 g. I in $PhNO_2$ treated with 0.86 g. $AlCl_3$, kept 48 hrs., and heated 1 hr. at 60°.

G. M. Kosolapoff

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RALL, K. B.

Chem

Conjugated systems. LXII. Condensation of [illegible] hydrocarbons with propiolic acid and its methyl ester. A. A. Petrov and K. B. Rall (Inst. Aviation Instr., Leningrad). *Zhur. Obshchei Khim.* 26, 1588-93(1956); cf. *C.A.* 50, 3292c, 11930a.—Heating 3 g. HC:CCO$_2$H with 6 ml. CH$_2$:CHCH:CH$_2$ in 10 ml. MePh with 0.1 g. hydroquinone in a sealed tube 10 hrs. at 145-50° gave 88% *2,5-dihydrobenzoic acid*, m. 121°, which failed to condense with maleic anhydride. The acid heated with S 45 min. gave BzOH, while treatment with Br in CHCl$_3$ gave a brominated acid, m. 151-2°. Heating 6.5 g. HC:CCO$_2$Me with 10 ml. CH$_2$:CHCH:CH$_2$ in MePh with 0.1 g. hydroquinone 6 hrs. at 120° gave 70% *Me 2,5-dihydrobenzoate*, b$_{20}$ 94-5.5°, d$_{20}$ 1.0720, n^{20}_D 1.4938, which sapond. with 10% NaOH to the acid described above. Heating 4.8 g. HC:CCO$_2$H and 12 g. piperylene in MePh with 0.1 g. hydroquinone 12 hrs. at 120° gave 74% *2-methyl-2,5-dihydrobenzoic acid*, m. 85-6°, which failed to condense with maleic anhydride and heated with S gave BzOH; heating with 20% HNO$_3$ to 200° gave phthalic acid. Similar reaction of CH$_2$:CHCH:CH$_2$ with HC:CCO$_2$Me gave in 10 hrs. at 140-5° 71% *Me 2-methyl-2,5-dihydrobenzoate*, b$_{20}$ 88-90°, d$_{20}$ 1.0269, n^{20}_D 1.4871, which with 10% NaOH gave the *free acid*, m. 85-6°, identical with the above. Heating 3.5 g. HC:CCO$_2$H with 3.5 g. isoprene and 0.1 g. hydroquinone in MePh 10 hrs. at 145-50° gave 76% *4-methyl-2,5-dihydrobenzoic acid* (I), m. 180-1°, which failed to condense with maleic anhydride on simple heating, but heated with it in the presence of H$_2$O and Pd black 6 hrs. it gave *p*-MeC$_6$H$_4$CO$_2$H; oxidation with HNO$_3$ gave terephthalic acid. Heating I in MeOH in the presence of H$_2$SO$_4$ gave the *Me ester*, b$_{20}$ 110.5°, d$_{20}$ 1.0430, n^{20}_D 1.4920; the same ester, b$_{20}$ 110.5-11.5°, d$_{20}$ 1.0435, n^{20}_D 1.4930, formed in 73% yield from 6 g. HC:CCO$_2$Me and 7 ml. iso-

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Petrov, A. A. and Kall, K. Q.

prene heated in MePh with 0.1 g. hydroquinone 10 hrs. at 140–5°. Attempted hydrogenation of the ester over Pd gave a mixt. of partly and completely aromatized esters; hydrogenation did proceed over Raney Ni. Heating 5 g. $HC:CCO_2H$ with 9 g. cyclohexadiene in MePh in the presence of 0.1 g. hydroquinone 7 hrs. at 115–20° gave some C_2H_4 and 40% BzOH. Heating 3.7 g. $HC:CCO_2H$ with 4.2 g. 2-chlorobutadiene in MePh with 0.1 g. hydroquinone 12 hrs. at 115–20° gave 72% *4-chloro-2,5-dihydrobenzoic acid*, m. 216–17°, which with dil. HNO_3 at 155° in 10 hrs. gave *p*-$ClC_6H_4CO_2H$. LXIII. Action of *N,N*-dichlorobenzenesulfonamide on alcoholic solutions of piperylene. T. A. Zyryanova and A. A. Petrov (Lensovet Technol. Inst., Leningrad). *Zhur. Obshchei Khim.* 26, 1593–601(1956); cf. *C.A.* 50, 3990*d*.—To 135 g. piperylene in 600 ml. MeOH was added in 3–4 hrs. at 0–5° 135 g. $PhSO_2NCl_2$; after standing until active Cl was nearly absent, the mixt. was steam distd. in the presence of a little Na_2SO_3. Fractionation of the distillate gave unreacted piperylene, 2 g. crude chloropentadiene, b. 106–7°, and 43.8 g. of a mixt. (I) of *MeCH:CHCH(OMe)CH₂Cl* and *MeCH(OMe)CH:CHCH₂Cl*, b_{20} 55–60°, d_{20} 0.9784–98.56, n_D^{20} 1.4431–1.4451 (the products were partially sepd. by fractionation). Ozonolysis gave AcOH and $ClCH_2CO_2H$. Refluxing the ethers with KOH in MeOH 18 hrs. gave *MeCH:CHC(OMe):CH₂*, b. 105–7°, d_{20} 0.8350, n_D^{20} 1.4535 (with 5% H_2SO_4 this gave MeCOCH:CHMe), and *MeCH(OMe)CH:CHCH₂OMe*, b_{20} 52.5–3.5°, d_{20} 0.8882, n_D^{20} 1.4220, which hydrogenated over Pd to the *satd. analog*, b. 141.5–5°, d_{20} 0.8583, n_D^{20} 1.4050. Hydrogenation of I over Raney Ni in the presence of $CaCO_3$ in MeOH gave a series of fractions containing: *MeCH(OMe)CH:CHMe*, b. 88–8.5°, d_{20} 0.7[illegible], n_D^{20} [illegible], and an impure specimen of *MeCH(OMe)Pr*, which hydrogenated

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TRIKOV, [illegible]

over Pd gave the pure *sald. ether*, b. 88-8.5°, d_{25} 0.7546, n_D^{25} 1.3840; an authentic specimen was prepd. from MeI and KOH heated with *sec*-amyl alc. in a sealed tube at 100°; the product, b. 88-8.5°, d_{30} 0.7564, n_D^{25} 1.3840. Hydrogenation of I also gave a mixt. (Ia) of *MeCH:CHCH-OMeCH₂Cl* and *PrCH(OMe)CH₂Cl* (II), b_{70} 48-8.5°, which hydrogenated over Raney Ni at 70 atm. H yielded pure II ether, b. 143-4°, b_{20} 48-8.5°, d_{20} 0.9590, n_D^{25} 1.4250; bromination of Ia gave some 14% pure II, which heated with KOH in Cellosolve 4 hrs. gave a little *2-methoxy-1-pentene* (III), b. 89-90°, d_{20} 0.7888, n_D^{25} 1.4062; this shaken with 5% H_2SO_4 gave MeCOPr, which confirmed the structure. Ozonolysis of III gave $PrCO_2H$. Reaction of 68 g. piperylene in 200 ml. EtOH with 67.5 g. $PhSO_2NCl_2$ as described above gave a mixt. (IV) of *MeCH:CHCH(OEt)CH₂Cl* (IVa) and *MeCH-(OEt)CH:CHCH₂Cl*, partially sepd. in fractions, b_{20} 56-61°, d_{20} 0.9576, n_D^{25} 1.4390, and b_{20} 61-4°, d_{20} 0.9613, n_D^{25} 1.4427; these were combined and examd.; ozonolysis gave AcOH and $ClCH_2CO_2H$; refluxing with EtOH-KOH 18 hrs. gave *2-ethoxy-1,3-pentadiene*, b. 124-6°, d_{20} 0.8294, n_D^{25} 1.4500 (with 5% H_2SO_4 this gave MeCOCH:-CHMe), and *MeCH(OEt)CH:CHCH₂OEt* (IVb), b_{20} 76.5-7°, d_{20} 0.8564, n_D^{25} 1.4235. IVb hydrogenated over Pd in MeOH to *MeCH(OEt)CH₂CH₂CH₂OEt*, b_{20} 73-5°, d_{20} 0.8511, n_D^{25} 1.4102. Hydrogenation of IV over Raney Ni in MeOH at 120 atm. H gave mixed *MeCH(OEt)CH:CHMe* and *Me-CH(OEt)Pr* (V), b. 106-7° (the mixt. hydrogenated over Pd gave the pure V, b. 105-6°, d_{20} 0.7536, n_D^{25} 1.3880, identical with a specimen from *sec*-amyl alc. and EtI with KOH), and a mixt. of 1-chloro-2-ethoxypentane (VI) and IVa, b_{20} 60-1°; further hydrogenation of the latter mixt. over Ni gave the pure VI, b_{20} 60-60.5°, d_{20} 0.9359, n_D^{25} 1.4230. The results indicate that in the reaction of piperylene with $PhSO_2NCl_2$ the molar ratio of products of 3,4-addn. and 1,4-addn. is 5-6 to 4. Thus, the presence of a Me group in piperylene greatly increases the yield of 1,4-adducts, with fixation of the Cl atom on the 4-position. G. M. Kosolapoff

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RALL, K. B.

Conjugated systems. LXII. Condensation of diene hydrocarbons with propiolic acid and its methyl ester. A. A. Petrov and K. B. Rall. *J. Gen. Chem. U.S.S.R.* 26, 1779-83 (1956) (English translation).—See *C.A.* 51, 1887*e*. LXIII. Action of *N,N*-dichlorobenzenesulfonamide on alcoholic solutions of piperylene. T. A. Zyryanova and A. A. Petrov. *Ibid.* 1785-93.—See *C.A.* 51, 1887*i*. B. M. R.

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PETROV, A.A.; RALL', K.B.

Conjugated systems. Part 81: Order of adding bromine to dialkyl-vinylacetylenyl- carbinols. Zhur. ob. khim. 27 no.9: 2402-2406 S '57. (MIRA 11:3)

1. Leningradskiy institut aviatsionnogo priborostroyeniya.
(Bromination) (Alcohols)

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RALL A 13

AUTHORS: Petrov, A. A., Rall', K. B., Semenov, G. I. 79-2-32/64

TITLE: Investigations in the Field of Conjugated Systems (Issledovaniya v oblasti sopryazhennykh sistem). LXXXIII. The Structure and Reactivity of the Methyl Ether of Vinylacetylene Carboxylic Acid (LXXXIII. Stroyeniye i reaktsionnaya sposobnost' metilovogo efira vinilatsetilenkarbonovoy kisloty).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 424-428 (USSR)

ABSTRACT: In the series of investigations of reactions at compounds with double and triple bindings the reaction of the above mentioned compound with bromine was investigated. The bromization takes place very slowly, is, however, accelerated at light (graphically shown), Since the disintegrates dibromide obtained decays in vacuum destillation the structure of the compound obtained was investigated in the infrared spectrum. For this purpose also the infrared spectra of the initial compound and of some other ethers of similar structure were taken. The methyl ether was obtained according to the prescription of I. N. Nazarov and M. V. Kuvarzina, the others according to the usual methods. Data concluding the spectrometer and the bromization are given. The measurements obtained showed that the bromization takes place at the double bindings and the compound thus remains an

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Investigations in the Field of Conjugated Systems 7-2-32/64
LXXXIII. The Structure and Reactivity of the Methyl Ether of Vinylacetylene Carboxylic Acid.

acetylene compound. Explanations of the various infrared spectra obtained and the connections between the different spectral bands and the structure of the compounds are given. There are 2 figures, 1 table, 16 references, 8 of which are Slavic.

ASSOCIATION: Technological Institute imeni Lensovet, Leningrad (Leningradskiy tekhnologicheskiy institut imeni Lensoveta)

SUBMITTED: February 26, 1957

AVAILABLE: Library of Congress

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PETROV, A.A.; RALL', K.B.; VIL'DAVSKAYA, A.I.

Preparation of nitrodienes and nitroenynes. Zhur. ob. khim. 34 no.10:3513-3514 O '64. (MIRA 17:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

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L 44159-65 EPF(c)/EWP(j)/EWA(c)/EWT(m)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5009018 S/0366/65/001/002/0240/0243

AUTHORS: Petrov, A. A.; Rall', K. B.; Vil'davskaya, A. I.

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21
B

TITLE: Synthesis and properties of nitroalkadienes-1,3

SOURCE: Zhurnal organicheskoy khimii, v. 1, no. 2, 1965, 240-243

TOPIC TAGS: nitroalkadiene, hydrocarbon, nitrogen dioxide, iodine

ABSTRACT: Various nitroalkadienes were produced by dehydrohalogenating the product of combining diene hydrocarbons with nitrogen dioxide and iodine, as described by K. B. Rall' and A. A. Petrov (ZhOKh, 34, 3621 1964). The yield of nitroalkadienes was 10-35%, with the major part of the matter suffering resination. All the nitroalkadienes represented yellow lacrimator liquids distillable in vacuum. Their structures and purity were determined from infrared nuclear magnetic resonance spectra. An attempt to produce 1-nitro-2-chlorbutadiene by separating hydrogen iodide from the product of combining NO_2 and iodine with chloroprene proved unsuccessful. The experimental part of the work is presented in detail, and the nitroalkadienes obtained are listed and described. Orig. art. has: 1 formula, 2 graphs, and 1 table.

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L 44159-65

ACCESSION NR: AP5009018

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensovata (Leningrad Technological Institute)

SUBMITTED: 22Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 004 OTHER: 002

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALL', K.B.;PETROV, A.A.

Reaction of diene hydrocarbons with nitrogen tetraoxide and iodine. Zhur. ob. khim. 34 no.11:3621-3624 N '64 (MIRA 18:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALL', K.B.; PETROV, A.A.

Conjugated systems. Part 154: Vinylacetylene derivatives of mercury. Zhur.ob.khim. 32 no.4:1095-1097 Ap '62. (MIRA 15:4)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Mercury) (Butenyne)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALL', M.B.

Practical significance of the combined use of cholecystography and duodenal catheterization in the diagnosis and therapy of cholecystitis. Vest. khir. 85 no. 7:109-117 Je '60. (MIRA 14:1)
(GALL BLADDER--RADIOGRAPHY) (DUODENUM--EXAMINATION)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

RALL', M.B., Cand med Sci -- (diss) "Acute cholecystitis and the remote consequences of its treatment." Len, 1956, 15 pp (First Len med inst im Academician I.P. Pavlov. Chair of General Surgery) 200 copies (KL, 56-6, 130)

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EXCERPTA MEDICA Sec 9 Vol 13/11 Surgery Nov 59

6797. REMOTE RESULTS IN THE TREATMENT OF PATIENTS WITH ACUTE CHOLECYSTITIS (Russian text) - Rall M. B. - KHIRURGIYA 1956, 11 (52-58) Tables 5

Of 638 patients with acute cholecystitis, 117 were operated upon, while 521 were treated conservatively. The operative mortality amounted to 7.6%. The results of treatment were studied in 222 patients (60 operated on and 162 treated conservatively). Remote results of surgical treatment with follow-up of from 1 to 10 yr. were good in 38 patients, satisfactory in 16 and poor in 6. The results of the conservative treatment were good in 30, satisfactory in 22 and poor in 110 patients. These data show that surgical treatment of acute cholecystitis gives better remote results than conservative therapy. However, it is not expedient to employ surgical treatment in all cases. Patients in whom the clinical picture is not very pronounced have to be subjected to examination of the bile ducts, after subsidence of the acute symptoms, further treatment depending on the results of examination.

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RALL', M.B.

Remote results of treating acute cholecystitis. Khirurgiia, Moskva 34 no.11:52-58 N '58. (MIRA 12:1)

1. Iz kafedry obshchey khirurgii (zav. - chlen-korrespondent AMN SSSR prof. A.N. Filatov) I Leningradskogo meditsinskogo instituta im. I.P. Pavlova.

(CHOLECYSTITIS, ther.
acute, remote results (Rus))

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RALL', M.B.

Analysis of the causes of unfavorable outcomes in the surgical treatment of cholecystitis. Khirurgiia 36 no.4:63-68 Ap '60. (MIRA 13:12)

(GALL BLADDER--SURGERY)

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RALL', M.B., kand.med.nauk; ZARETSKIY, I.P.

Diagnostic significance of cholecystotomography. Vest. khir. 92 no.3: 56-59 Mr '64. (MIRA 17:12)

1. Iz kliniki obshchey khirurgii (zav. - prof. S.M.Kurbangaleyev) 1-go Leningradskogo meditsinskogo instituta imeni Pavlova.

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BALL', S. F. Dr. Tech. Sci.

Dissertation: "Production of Nutritive Glucose, and Crystallization as a Principal Process of its Obtaining." Inst. of National Economy, imeni G. V. Plekhanov, 24 Oct 47.

SO: Vechernyaya Moskva, Oct, 1947 (Project (#17836)

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RALL, Yu. M.

20638 Rall, Yu. M. Otstayushchaya oblast biologicheskogo obrazovaniya. [Zoologiya pozvonochiykh]. Vestnik vyssh. shkoly, 1949, No. 6, s. 36-37

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

Otstayushchaya oblast' biologicheskogo obrazovaniya [Zoologiya pozvonochnykh]
Lagging Regional Biological Education [Zoology of the spine]

Vestnik vyssh. Shkoly (Herald of Higher Schools)

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RALL', Yu.M. Dec 52

USSR/Geophysics - Tsimlyansk Project

"In the Sands of Tsimlyanskiy Peninsula," Prof Yu.M. Rall'

Priroda, No 12, pp 100-105

States that the creation of the Tsimlyanskoye Sea has formed new peninsulas and bays in the tremendous water reservoir, which has posed new problems in the transformation of nature. Zoologists of Rostov U made their ecological survey of the sandy lands as early as May, Jun 52.

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RALL', Yu.M.; KRITSKAYA, T.I.

Result of the acclimatization of Ussuri raccoon dogs in Rostov Province. Zool.zhur. 32 no.3:513-523 My-Je '53. (MLRA 6:6)

1. Rostovskiy gosudarstvennyy universitet imeni V.M. Molotova.
(Rostov Province--Raccoon dogs)

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BALL', Yu.M.

Nature and animals of the Tsimlyansk Peninsula. Izv.Vses.geog.ob-va 85 no.4:382-392 Jl-Ag '53. (MLRA 6:8)
(TSimlyansk Peninsula--Natural history) (Natural history--TSimlyansk Peninsula)

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BALL, Yu.M.; KARAYEROVA, G.P.

New data on the occurrence and the harmful activity of the Jerboa Scirtopoda telum Licht. Zool.zhur. 33 no.5:1184-1185 S-O '54. (MLRA 7:11)

1. Rostovskiy gosudarstvennyy universitet im. V.M.Molotova. (Rostov Province--Jerboas) (Jerboas--Rostov Province)

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RALL', Yu.M.; KIYANOVA, V.S.; STRELINA, T.D.

Observations of rodents in irrigated fields in Rostov Province. Zool.zhur. 33 no. 6:1390-1395 N-D '54. (MLRA 8:2)

1. Rostovskiy gosudarstvennyy universitet im. V.M.Moloteva.
(Rostov Province--Rodentia)

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L

RALL', Yu.M.

Animal herd life as an example of intraspecific relationships. Bot. zhur.40 no.4:565-567 Jl-Ag'55. (MLRA 8:11)

1. Protivochumnyy institut, g. Stavropol'-Kavkazskiy
(Animals, Habits and behavior of)

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