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used. The analysis is carried out after absolute blackening of the spectral lines. For the determination of sodium, barium, and calcium two films are used in parallel: "Panchrom" and "Isoopto", the spectrum of sodium being recorded by the first, and that of barium by the second. There are 4 figures, 3 tables, and 4 references, 2 of which are Slavic.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

SHMANENKOV, I.V.; TITOV, V.I.; RUSANOV, A.K.; ROZHKOVA, Ye.V.; EYGELES, M.A.; ZVEREV, L.V.

All-Union conference on laboratory methods of studying ores and minerals of rare and trace elements. Sov. geol. no.61:158-166 '57. (MIRA 11:4)

1. Vsesoyuznyy institut mineral'nogo syr'ya.
(Mineralogy--Congresses)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

Rusanov, A.K.

53-2-8/9

AUTHORS: Koritskiy, V.G., Nalimov, V.V., Nedler, V.V., Payskiy, S.M. Rusanov, A.K., Filimonov, L.N.

TITLE: A Short Survey of the Development of the Emission Spectral Analysis in the USSR (Kratkiy ocherk razvitiya emissionnogo spektral'nogo analiza v SSSR)

PERIODICAL: Uspekhi Fiz. Nauk, 1957, Vol. 62, Nr 2, pp. 435 - 454 (USSR)

ABSTRACT: A voluminous investigation of the flame spectra from a Bessemer converter (bessemerovskiy konvertor), was published in 1876 by D.K. Chernov. D.K. Chernov furthermore found several interesting laws with respect to the relation between the flame spectrum and certain stages of the Bessemer proces.(bessemerovskiy protsess). All these laws, however, were of an entirely qualitative character. First publications on spectroscopy were published in the Soviet Union at the end of the twenties. 1931 S.G. Landsberg turned his interest towards practical spectral analysis, and together with his students he started the systematic elaboration of the practical applications of the emission spectral analysis. From 1931 to 1950 about 1000 investigations were published in the scientific journals of the Soviet Union, and this number doubled up to the present. This indicates a

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53-2-8/9

A Short Survey of the Development of the Emission Spectral Analysis in the USSR

very wide range of the research dealing with this subject. The majority of this papers were published in the journal "Zavodnaya laboratoriya" (Plant Laboratory) and "Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya". The first section of this survey deals with apparatus for the spectral analysis. In the machine-building industry spectral analysis is utilized for the control of the casting of iron and non-ferrous metals as well as for the control of semifinished products, single parts and finished production parts. By these means the metals delivered to the plants are also controlled. Spectral analysis was empbyed to a special degree in the automobile plant "ZIL". In iron metallurgy the spectral analysis is used for the express-analysis of steel during its production and for the final analysis, the so-called "marking analysis". Further possibilities of application in iron metallurgy are enumerated. In the metallurgy of non-ferrous metals and in iron metallurgy as well, the semi quantitative methods of analysis are employed with success. The spectral analysis also makes possible a fast and practically simultaneous determination of the chemical elements contained in the mineral raw materials. There are 13 figures, 3 tables and 75 Slavic references.

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A Short Survey of the Development of the Emission Spectral Analysis in the USSR

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24(7) PHASE I BOOK EXPLOITATION SOV/1700

L'vov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) /Lvov/ Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Olsuberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

Rusanov, A.K., and V. G. Khitrov. Spectral Analysis of Ores by Blowing Powder Samples Into the Arc Discharge 102

Melamed, Sh.G., and A.M. Saltykova. Spectrographic Determination of Tin, Lead, Antimony, and Cadmium in Titanium, Zirconium, Tantalum, and Niobium 181

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

24(4) PHASE I BOOK EXPLOITATION SOV/1608

Rusanov, A.K. and N.V. Il'yasova

Atlas plamennykh, dugovykh i iskrovykh spektrov elementov; dlya oblastey spektrov: Plamennykh --2800-9000 Å, dugovykh i iskrovykh-- 2100-6700 Å. (Atlas of Flame, Arc and Spark Spectra of Elements; With Spectrum Range From 2800 to 9000 Å for Flame Spectra, and From 2100-6700 Å for Arc and Spark Spectra) Moscow, Gosgeoltekhizdat, 1958. 119 p. 7,000 copies printed.

Sponsoring Agencies: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syrya.

Ed. of Publishing House: S.S. Mukhin; Tech. Ed.: K.V. Krynochkina.

PURPOSE: This book is intended primarily for geochemists and metallurgists, as well as for others who use methods of spectrum analysis in their respective fields.

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Atlas of Flame, Arc and Spectra (Cont.) SOV/1608

COVERAGE: This book includes the explanatory text to the atlases of 60 charts for flame, arc, and spark spectra of 78 elements with 3600 lines. The most important ranges of the spectrum shown are 2800-9000 Å for flame spectra, and2100 - 6700 Å for arc and spark spectra. The text contains tables which show wave lengths of lines and molecular bands, ionization potentials of elements, and line excitation potentials. The authors express their gratitude to S.M. Rayskiy for advice. There are 37 references, of which 14 are Soviet, 12 English, 5 Italian, 4 German, and 2 French.

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Atlas of Flame, Arc and Spectra (Cont.) SOV/1608

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; KHITROV, V.G.

Spectrum analysis of ores by air injection of powers into an arc discharge. Fiz.sbor. no.4:102-105 '58. (MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Ores--Spectra) (Electric arc)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; IL'YASOVA, N.V.

Atlas for the interpretation of flame spectra of elements (2800 - 9000 Å). Fiz.sbor. no.4:184 '58. (MIRA 12:5)

1. Vsesoyuznyy institut mineral'nogo syr'ya.
(Spectrum analysis)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

POLYAKOV, S.M.; RUSANOV, A.K.

Spectrographic analysis of rare earth elements. Fiz.sbor. no.4:346-350 '58. (MIRA 12:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut redkikh i malykh metallov, Giredmet.
(Rare earths--Spectra)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

SOLODOVNIK, S.M.; RUSANOV, A.K.; KONDRASHINA, A.I.

Spectral determination of scandium in minerals, ores, and products of processing. Fiz.sbor. no.4:366-367 '58. (MIRA 12:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut redkikh i malykh metallov, Giredmet.
(Scandium--Spectra)

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24(7) SOV/48-23-9-12/57

AUTHORS: Rusanov, A. K., Sosnovskaya, L. I.

TITLE: The Rules of the Influence of "Third" Elements in the Spark Analysis of Solutions

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 9, pp 1079-1081 (USSR)

ABSTRACT: This article is the abridged rendering of a treatise published in the periodical Analiticheskaya Khimiya. The dependence of spectral line intensity on the properties of the solutions and the reciprocal influence brought to bear on elements is investigated. The solution was introduced into the discharge zone by means of rotating metal- or graphite disks, in which case, whenever graphite disks were used, the spark discharge took place between the two films of the solution, the thickness of which amounted to between 0.003 and 0.06 mm. In other experiments, graphite capillary electrodes were used by the aid of which the solution was conveyed into the discharge zone. In these experiments the IG-2 spark generator constructed according to the wiring scheme of Rayskiy was used. Line intensity was found to decrease with increasing film thickness. If, however, the film is not perforated by the spark, line intensity does not decrease even in the case of greater thicknesses.

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SOV/48-23-9-12/57

The Rules of the Influence of "Third" Elements in the Spark Analysis of Solutions

When evaluating the concentration of elements according to the absolute values of spectral-line intensity, the electric conductivity of the solution, the thickness of the layer of liquid, and its restoration rate must be taken into account. The influence exercised by "third" elements upon the absolute and relative spectral-line intensities depends on the ionization potential and the concentration of atoms of the influencing elements. Thus, these "third" elements exercise a minimum influence in the case of discharges between non-perforated surfaces of solutions. In the case of spark discharges between two thick films of the solution, line intensity practically does not depend on the ionization potential and on the atom concentration of the "third" elements; line intensity increases rapidly if their ionization potential decreases and if their concentration increases. There are 2 figures.

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

KALININ, Sergey Ksenofontovich; MARZUVANOV, Vasiliy Leonidovich; NAYMARK, Lyubov' Efroymovna; ISMAGULOVA, Kul'tay Ismagulovna; HUSANOV, A.K., prof., doktor tekhn.nauk, red.; ALEKSANDRIYSKIY, V.V., red.; ROROKINA, Z.P., tekhn.red.

[Atlas of spectral lines for a glass spectrograph] Atlas spektral'nykh linii dlia stekliannogo spektografa. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1960. 61 p., 26 charts. (MIRA 13:7)
(Spectrograph)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; ALEKSEYEVA, V.M.; KHITROV, V.G.; MATIS, T.I., red.izd-va; BYKOVA, V.V., tekhn.red.

[Quantitative spectral determination of rare and scattered elements in ores and minerals] Kolichestvennye spektral'noe opredelenie redkikh i rasseiannykh elementov v rudakh i mineralakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geologii i okhrane nedr, 1960. 194 p. (MIRA 13:11)
(Metals, Rare and minor)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

BLOKH, I.M.; RUSANOV, A.K.

Spectrographic determination of boron in zirconium. Trudy Kom. anal. khim. 12:160-165 '60. (MIRA 13:8)
(Zirconium--Analysis) (Boron--Analysis)
(Spectrum analysis)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

MELAMED, Sh.G.; RUSANOV, A.K.; ZEMSKOVA, M.G.

Determining tantalum and niobium in the sum of their pentoxides. (MIRA 13:8)
Trudy Kom. anal. khim. 12:65-70 '60.
(Tantalum oxide) (Niobium oxide)

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5.5310

77744
SOV/75-15-1-6/29

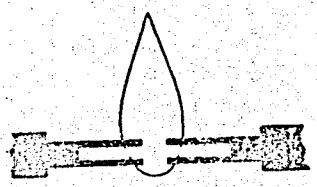
AUTHORS: Alekseyeva, V. M., Rusanov, A. K.

TITLE: Spectral Determination of Scandium in Ores

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol 15, Nr 1, pp 27-30 (USSR)

ABSTRACT: Spectrographic determination of scandium in silica ores was studied. The following apparatus and materials were used: Horizontal graphite electrodes (see Fig. 1); auto-collimating spectrograph KS-59 with glass optics; and buffer powder consisting of equal parts (by weight) of carbon and $SrCO_3$, into which 0.5% of lanthanum oxide is introduced. A sample of the analyzed ore (0.05 g) is mixed with the buffer powder (0.15 g); current (a-c) of 15 amp and 220 v is applied.

Fig. 1. Graphite electrodes and the flame.



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Spectral Determination of Scandium in Ores 77744
SOV/75-15-1-6/29

Calibration graphs (see Fig. 2) were used.

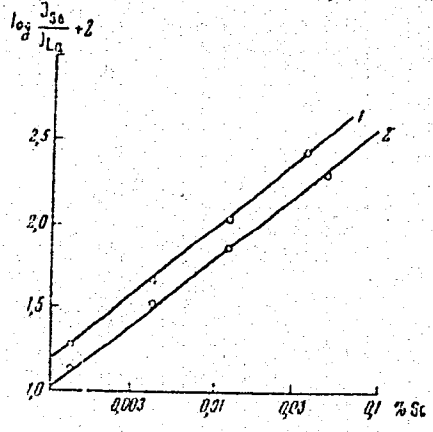

Fig. 2. Dependence of relative Sc and La line intensities on the concentration of Sc in ore: (1) Sc II, 4246.83 and La II, 4263.58; (2) Sc II, 4246.83 and La II, 4269.49.

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Spectral Determination of Scandium in Ores 77744
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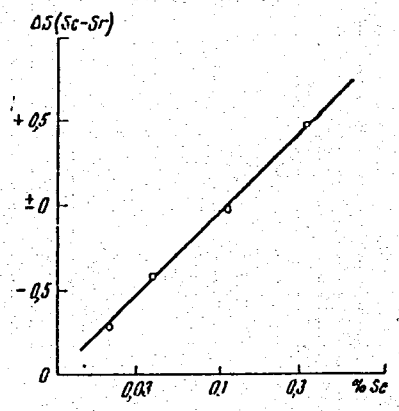

Fig. 3. Dependence of difference in darkening of lines of Sc, 2552.36 and Sr, 2423.6, on the concentration of Sc in the ore.

There are 2 tables; 3 figures; and 10 references, 2 U.K., 1 German, 7 Soviet. The 2 U.K. references are: Ahrens, L. H., Spectrochem. Analysis, Cambridge (1950); Kvalheim, A., Strock, W., Spectrochem. Acta, 1, 221 (1939).

Card 4/5

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

Spectral Determination of Scandium in Ores 77744
SOV/75-15-1-6/29

Using the proposed method, 0.001-0.1% Sc can be determined in silicate ores with an accuracy of ±10% (see Table 2). Composition of the ores has practically no effect on the results, except for the presence of Ce (1%), which interferes, since the analytical Sc line overlaps the Ce line (4246.4). The analyzed sample should not contain La (over 1%) since it is used as internal standard in this case.

(1)	(2)		(5)
	(3)	(4)	
(6)	0,0185	0,0180	−2,7
(7)	0,0185	0,0180	−2,7
(8)	0,041	0,042	+2,4
(9)	0,041	0,040	−2,4
(10)	0,0060	0,0060	±0
(8)	0,041	0,045	+9,8
(11)	0,0185	0,0190	+2,7
(8)	0,041	0,044	+7,3
(12)	0,0185	0,0190	+2,7
(8)	0,041	0,036	−12,2

Table 2. (1) Composition of sample; (2) scandium; (3) taken, %; (4) found, %; (5) relative error of a single determination; (6) quartz; (7) quartz [50%] and feldspar [50%]; (8) the same; (9) quartz [50%] and Al_2O_3 [50%]; (10) quartz [50%] and $CaCO_3$ [50%]; (11) quartz [50%] and MgO [50%]; (12) quartz [50%] and Fe_2O_3 [50%].

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Spectral Determination of Scandium in Ores 77744
SOV/75-15-1-6/29

ASSOCIATION: All-Union Institute of Mineral Raw Materials, Moscow (Vsesoyuznyy institut mineral'nogo syr'ya, Moskva)

SUBMITTED: October 29, 1958

Card 5/5

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

23593

S/075/61/016/003/004/007
B106/B208

55310 11601 1273, 1282

AUTHORS: Rusanov, A. K., Alekseyeva, V. M., and Il'yasova, N. V.

TITLE: Spectroscopic determination of germanium and other elements in ores with sulfidizing of the latter during their evaporation

PERIODICAL: Zhurnal analiticheskoy khimii, v. 16, no. 3, 1961, 284-291

TEXT: The authors showed that in many cases of spectroscopic determination of elements which form high-volatility sulfides the sensitivity of the determination may be considerably increased by adding sulfur powder to the ore to be analyzed (oxide or other ore), and by evaporating the powdery mixture from a channel of the carbon electrode. Fig.1 shows the evaporation time of equal atomic quantities of various elements in the form of sulfides and oxides in the absence of compounds of other elements. Evaporation was carried out from a 5 mm deep channel (3.5 mm diameter) of the carbon electrode, the arc was fed with alternating current of 8 a and 220 v. It may be seen from the figure that the evaporation time is considerably shortened in the conversion of oxides to sulfides, particularly

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in the case of germanium, but also of tin and lead. The data of Fig.1 are only valid if the respective elements are present in the ore to be analyzed in the form of isolated impurities of oxide compounds which quickly react with sulfur in the reducing zone and do not react with the principal component of the specimen forming new low-volatile compounds. These conditions are satisfied especially with quartz and silicate powders which contain oxide compounds of microelements as impurities which tend to form sulfides. If, however, the elements to be determined are in isomorphic form or influence the composition of the melt after the specimen was melted, the chemical composition of the melt determines the rate of evaporation. These conditions particularly occur in the analysis of oxidic ores. When iron oxides are evaporated the melts contain germanium, tin and antimony, and separate entering of these elements and of iron into the cloud of the arc cannot be achieved. If, however, a mixture of iron oxides with sulfur in a ratio of 2:1 is evaporated, germanium, tin and antimony completely evaporate within 50-90 sec, while the main quantity of iron enters the cloud of the arc later. The time until tin, antimony and germanium enter the cloud of the arc is considerably shortened by adding sulfur. Similar conditions may be observed in the evaporation of quartz specimens containing oxidic impu-

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rities of chalcophilic elements. All these results only refer to evaporation in an a-c arc heated by high-frequency currents. The addition of sulfur to ores which contain large amounts of iron, quartz, and silicates, considerably increases the accuracy of determination of elements forming high-volatile sulfides. Highest accuracy is attained if the specimens are evaporated from chambers of the electrode, which are heated independently of each other and take up to 1 g of substance. It is possible in this way to determine $1 \cdot 10^{-5}$-$7 \cdot 10^{-6}$% germanium on the basis of the line at 2651.2 A, and of $1 \cdot 10^{-5}$% cadmium, thallium, tin, antimony, bismuth, arsenic, and zinc in the evaporation of 0.4 g of an iron oxide ore. Basing on these results, the authors devised a method for the quantitative determination of germanium in oxidic and sulfidic iron ores, silicates, and ashes of coals, which is described in detail in this paper. This method permits the determination of $2 \cdot 10^{-4}$% germanium with an error of ±0.6%. The above-described application of electrodes with chambers increases the accuracy by 10-20 times of determination. Tables 2 and 3 show the results of chemical and spectrum analysis of oxidic and sulfidic ores and coal ashes, and the results of spectrum analysis of ore specimens with germanium impurities. An analyst

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S/075/61/016/003/004/007
B106/B208

Spectroscopic determination of ...

is able to analyze about 15 ore specimens during one working day by means of this method. The present paper was presented to the Vsesoyuznoye soveshchaniye po analizu redkikh i poluprovodnikovykh elementov (All-Union Conference on the Analysis of Rare and Semiconductor elements), convened by the GEOKhI AN SSSR (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR) (Moscow, December 1959), and to the Soveshchaniye po spektral'nomu analizu rud nareckiye i rasseyannyye elementy (Conference on Spectrum Analysis of Ores for Rare and Trace Elements), convened by the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Protection of the Mineral Resources USSR (Tashkent, April 1959)). There are 8 figures, 3 tables, and 22 references: 14 Soviet-bloc and 8 non-Soviet-bloc. The three most recent references to English-language publications read as follows: Frederick W. J., White J., Bilez., Anal. Chem. 26, 1328 (1954); Pitt J. I., Fletcher M. E., Spectr. Acta 7, 214 (1955); Janguly N. C., Dutta D. P., Scient. and Industr. Res., 15-B, N 6, 327 (1956).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva (All-Union Scientific Research Institute of

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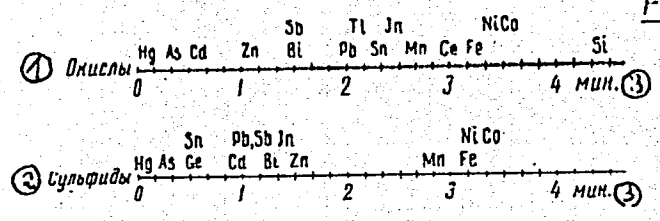
B106/B208

Spectroscopic determination of ...

Mineral Raw Materials, Moscow)

SUBMITTED: April 28, 1960

Fig. 1



Legend to Fig.1: Evaporation time of $1 \cdot 10^{-4}$ g-atom of various elements in the form of sulfides and oxides from the channel of a carbon electrode of an a-c arc; (1) -oxides; (2) - sulfides; (3) - min.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; BATOVA, N.T.

Effect of the powder content on the results of spectral analysis by the injuction method. Zav.lab. 27 no.3:299-306 '61. (MIRA 14:3)

1. Vsesoyuznyy nuachno-issledovatel'skiy institut mineral'nogo syr'ya. (Spectrum analysis)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

KHITROV, V.G.; RUSANOV, A.K.

Rapid spectrographic determination of germanium in iron oxide ores. Zav.lab. 27 no.7:849-851 '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Germanium--Spectra) (Iron ores--Analysis)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

ACC NR: AP6028191 (A) SOURCE CODE: UR/0032/66/032/006/0696/0700

AUTHOR: Rusanov, A. K.; Alekseyeva, V. M.; Il'yasova, N. V.

ORG: All-Union Scientific Research Institute for Mineral Raw Materials (Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo cyr'ya)

TITLE: Elimination of the mutual effect of tantalum and niobium in the spectrum analysis of mineral ores

SOURCE: Zavodskaya laboratoriya, v. 32, no. 6, 1966, 696-700

TOPIC TAGS: spectrum analysis, tantalum, niobium cobalt compound

ABSTRACT: The article proposes a spectral method for simultaneous determination of niobium and tantalum, which eliminates the mutual effect of these two elements. The method is based on the addition of cobalt chloride to the samples being analyzed. In the interval 0.003-0.1%, the reproducibility (variation coefficient) of a single determination of tantalum and niobium is 11%. It was found that the effect of niobium on the intensity of the tantalum lines can be eliminated by the creation of conditions under which tantalum will appear in the arc cloud independently of the appearance of niobium. This is achieved by the addition to the samples of reagents (metal chlorides or fluorides) which lead to the formation of new compounds. The experimental results given in the article were obtained by additions of anhydrous cobalt chloride. It

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ACC NR: AP6028191

follows from the data that both tantalum and niobium can be determined by this method in spite of the presence of up to 2% niobium in silicate ores. It was found that considerable changes in concentration of tungsten, zirconium, and thorium in the samples do not affect the intensity of the niobium lines. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 004

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

BYSANOV, A.P., ESTOVA, N.S.

Effect of particle size and fractional evaporation of elements on the intensity of spectral lines when powders are injected into the arc plasma. Zhur. anal. khim. 20 no.6:649-654 '65. (MIRA 18:7)

1. Vses yuzhnyy nauchno-issled vetel'skiy institut mineral'nogo syr'ya, Moskva.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

VOROB'YEV, V.S.; RUSANOV, A.K.

Quantometric and spectrographic analysis of silicate rocks. Zav. lab. 30 no.8:945-949 '64. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; VOROB'YEV, V.S.

Even injection of powders in a highly dispersed state into the flame of the arc during the spectral analysis of substances. Zav. lab. 30 no.1:41-43 '64. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RYABCHIKOV, D.I., prof., otv. red.; VAGINA, N.S., kand. tekhn. nauk, red.; KORCHEMNAYA, Ye.K., kand. khim. nauk, red.; RUSANOV, A.K., doktor tekhn. nauk, red.; RYABUKHIN, V.A., kand. khim. nauk, red.; SENYAVIN, M.M., kand. khim. nauk, red.; SKLYARENKO, Yu.S., kand. khm. nauk, red.; STROGANOVA, N.S., nauchn. sotr., red.; MAKUNI, Ye.V., tekhn. red.

[Rare-earth elements] Redkozemel'nye elementy. Moskva, Izd-vo AN SSSR, 1963. 391 p. (MIRA 17:2)

1. Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.

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RUSANOV, A.K.; BATOVA, N.T.

"Characteristic features of the spectrochemical analysis of powdered samples introduced into arc plasma by a stream."

Report presented at the Spectroscopicum, 11th Intl. ~~Colloq~~ Colloq., Belgrade, Yug, 30 Sep - 4 Oct 63.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; ALEKSEYEVA, V.M.; IL'YASOVA, N.V.; KHITROV, V.G.

Spectrographic quantitative determination of small amounts of rare earths in rocks and minerals. Zhur.anal.khim. 17 no.7:809-819 O '62. (MIRA 15:12)

1. All-Union Scientific Research Institute of Mineral Raw Materials, Moscow.

(Rare earths--Spectra)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A. K.; BATOVA, N. T.

Characteristics of the method of blowing powders into the arc flame in the spectrum analysis of ores. Izv. AN SSSR. Ser. fiz. 27 no.1:8-9 Ja '63. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

(Spectrum analysis) (Powder metallurgy)
(Electric arc)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

S/058/63/000/003/034/104
A062/A101

AUTHOR: Rusanov, A. K.

TITLE: Features of the quantitative spectra analysis of powder-like substances

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 43, abstract 3D291 ("Chem. analit." (Polska), 1962, v. 7, no. 2, 389 - 403; summary in English)

TEXT: A survey devoted to the description of methods of spectrochemical analysis of powder-like substances and the discussion of elementary processes in sources of spectrum excitation, affecting the results of the analysis. There are 38 references.

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

S/048/63/027/001/004/043
B163/B180

AUTHORS: Rusanov, A. K., and Batova, N. T.

TITLE: Features of the method of blowing powders into the arc flame in the spectroscopic analysis of ores

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 1, 1963, 8-9

TEXT: The development of the luminous gas cloud and its content of evaporation products from the powder and electrodes was studied by high-speed color cinematography through a synchronized rotating shutter. The first stage of the discharge, which lasts ~0.002 sec is particularly important for the powder particles vaporization and spectral line emission. The temperature of the discharge is then maximal, and the powder particles are most efficiently vaporized and excited. Silicate powders are not completely vaporized if their particle diameter exceeds 0.01 mm. As particle size falls to this value the line intensity increases systematically, and the intensity ratio of spark and arc lines decreases, which indicates a reduction of arc temperature. Below 0.01 mm the intensity decreases, and the ratio of spark and arc line intensity increases, as less particles

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reach the discharge zone. The highest line and weakest background intensity come from the central part of the arc torch between 0.0003 and 0.002 sec after arc formation. This part of the torch is about 4 mm wide, 2-5 mm from the electrode axis, and during this period it emits 80-90% of the total line intensity. To reduce the effects composition and dispersion of the powder, and of the blowing velocity, on the results the following is recommended: 1) The powder should be carefully pulverized to definite size distribution; 2) excitation sources should be used which have high discharge power in the first stage; 3) the powders should be mixed with graphite, to improve the spraying in air; 4) chemical pre-treatment of the powder to obtain uniform distribution both of the elements to be determined and the internal standards; 5) if the line intensities of the test element and internal standard are to be compared, compounds should be used which are evaporated under similar temperature conditions. A more detailed version of the present paper is published in the Zhurnal analiticheskoy khimii. This paper was presented at the 14th Conference on Spectroscopy in Gor'kiy, July 5-12, 1961.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (All-Union Scientific Research Institute of Mineral Raw Materials)

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RUSANOV, A.K., red.; TITOV, V.I., red.; SHMANENKOV, I.V., red.; STOLYAROV, A.G., red. izd-va; BYKOVA, V.V., tekhn. red.

[Chemical, physicochemical, and spectral methods of analyzing ores of rare and trace elements] Khimicheskie, fiziko-khimicheskie i spektral'nye metody issledovaniia rud redkikh i rasseianykh elementov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1961. 138 p. (MIRA 14:8)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. (Metals, Rare and minor—Analysis)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.K.; BATOVA, N.T.

Particular features of the method of blowing powders into the arc in the spectral analysis of ores. Zhur.anal.khim. 17 no.4:404-410 Jl '62. (MIRA 15:8)

1. All-Union Scientific Research Institute of Mineral Raw Materials, Moscow.
(Ores—Analysis) (Spectrum analysis)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

S/075/62/017/007/001/006
B119/B186

AUTHORS: Rusanov, A. K., Alekseyeva, V. M., Il'yasova, N. V., and Khitrov, V. G.

TITLE: Spectrographic quantitative determination of small concentrations of rare earths in rocks and minerals

PERIODICAL: Zhurnal analiticheskoy khimii, v. 17, no. 7, 1962, 809 - 819

TEXT: A direct simultaneous determination of rare earths in ores was made using a ДФС-13 (DFS-13) diffraction spectrograph having a dispersion of 4 - 2 Å/mm. The spectrum was excited by evaporating the powder sample, mixed with buffer mixture, in a carbon arc discharge. Otherwise, the procedure followed the traditional spectrographic method. The standard experimental error of the method is 15%. The sensitivity of determination is 0.001% for Yb, 0.003% for Tu and Y, 0.005% for La, 0.01% for Nd, 0.03% for Pr, Gd, Dy, and Lu, 0.04% for Ce, 0.05% for Sm, Eu, Tb, Ho, and Er. The sensitivity can be increased to the 30 - 100 times by a simple chemical enrichment of the samples with rare earths. In the original paper the analytic spectrum lines of the rare earths and of the disturbing elements

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

were tabulated on 5 pages. There are 3 figures and 4 tables. The most important English-language reference is: J. A. Norris, C. E. Repper, Analyt. Chem. 24, 1399 (1952).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva (All-Union Scientific Research Institute of Mineral Raw Materials, Moscow)

SUBMITTED: December 30, 1961

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A. K.

Particular characteristics of the special analysis of powder materials. Chem anal 7 no.2:389-403 '62

1. All-Union Institute of Mineral Raw Stuffs, Moscow.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

L 26092-66 EWP(j)/EWT(m)/ETC(m)-6/T IJP(c) RM/WW

ACC NR: AP6015045 (A) SOURCE CODE: UR/0190/66/008/005/0804/0808 21 20 B

AUTHOR: Rusanov, A. L.; Korshak, V. V.; Krongauz, Ye. S.; Nemirovskaya, I. B.

ORG: Institute of Heteroorganic Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Synthesis and investigation of poly-1,3,4-oxadiazoles

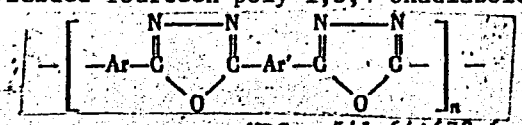
SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 804-808

TOPIC TAGS: polyoxadiazole synthesis, polyoxadiazole property, heat resistant polymer

ABSTRACT: Fourteen high-molecular-weight polyhydrazides of the general formula

$$-[-Ar-CO-NH-NH-CO-Ar'-CO-NH-NH-CO-]_n-$$

have been prepared by low-temperature solution polycondensation of dihydrazides and dichlorides of aromatic dicarboxylic acids in hexamethylformamide. The polyhydrazides had softening points of 280—400C. Cyclodehydration of the polyhydrazides at 250—320C in vacuum yielded fourteen poly-1,3,4-oxadiazoles of the general formula



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ACC NR: AP6015045

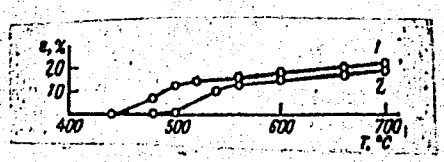
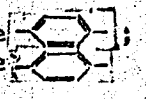
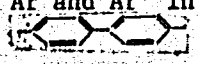


Fig. 1. Thermomechanical curves of two poly-1,3,5-oxadiazoles

1 - Ar and Ar' in Formula (B) are  ;
2 - Ar and Ar' in Formula (B) are  and , respectively.

The polyoxadiazoles had a softening point above 400C and were soluble without decomposition in concentrated sulfuric acid. Thermomechanical curves of the two most heat-resistant polyoxazoles synthesized are given in Fig. 1. Orig. art. has: 2 figures and 1 table. [BO]

SUB CODE: 07, 11/ SUBM DATE: 03Apr65/ ORIG REF: 003/ OTH REF: 005/ ATD PRESS: 4253

Card 2/2 cc

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A L 10191-66 EWT(m)/EWP(j)/T/ETC(m) WW/RM

ACC NR: AP5028486 SOURCE CODE: UR/0286/65/000/020/0065/0065

INVENTOR: Korshak, V. V.; Krongauz, Ye. S.; Rusanov, A. L.

ORG: none

TITLE: Preparative method for polyesters. Class 39, No. 175652

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 65

TOPIC TAGS: polyester plastic, heat resistant plastic

ABSTRACT: An Author Certificate has been issued for a preparative method for heat-resistant polyesters, involving the condensation of aromatic dicarboxylic acid chlorides with hydroxybenzoic acid hydrazides such as the 3- and 4-hydroxybenzoic acid hydrazides. [SM]

SUB CODE: 07,11/ SUBM DATE: 25Jan65/ ATD PRESS: 4159

Card 1/1 UDC: 678.673'1

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

L 51079-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 WW/BM
ACCESSION NR: AP5012455 UR/0062/65/000/004/0726/0728

33
32
B

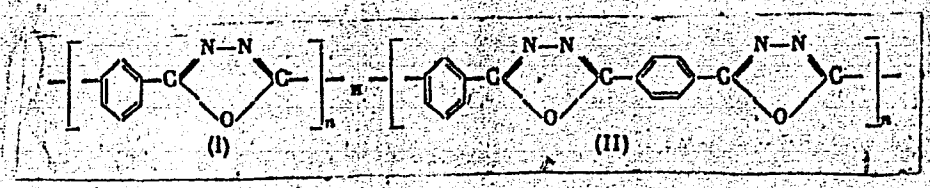
AUTHOR: Korshak, V. V.; Krongauz, Ye. S.; Rusanov, A. L.

TITLE: Synthesis of straight chain poly-1,3,4-oxadiazines

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1965, 726-728

TOPIC TAGS: polyoxadiazole, heat resistant polymer, polyhydrazide

ABSTRACT: In a search for new types of heat-resistant polymers, poly-1,3,4-oxadiazines having the following structure,



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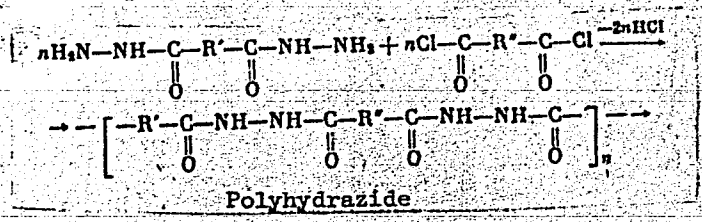
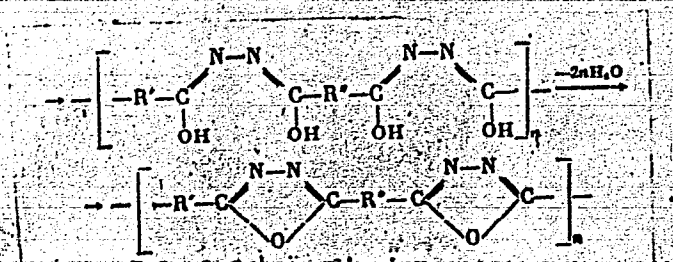
ACCESSION NR: AP5012455

were prepared by a two-step synthesis:



Polyhydrazide



Poly-1,3,4-oxadiazine

Card 2/3

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L 51079-65

ACCESSION NR: AP5012455

Of three methods of polyhydrazide synthesis attempted (interfacial, high-temperature, and low-temperature polycondensation), low-temperature polycondensation in hexamethylphosphoramide gave the best results (highest polymer yields and viscosities). The poly-1,3,4-oxadiazines were prepared from the polyhydrazides at 300C under vacuum. The poly-1,3,4-oxadiazines were powders infusible up to 420C, soluble only in conc. H_2SO_4, and having a reduced viscosity of 0.3—0.4. Polymer structures were confirmed by IR spectroscopy. Orig. art. has: 5 formulas and 4 figures. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

SUBMITTED: 13Jul64 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 001 OTHER: 009 ATD PRESS: 4007

Card 3/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

L 44258-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6013280 (A) SOURCE CODE: UR/0413/66/000/008/0079/0079

INVENTOR: Korshak, V. V.; Krongauz, Ye. G.; Rusanov, A. L.

ORG: none

15
B

TITLE: Preparation of polyamides. Class 39, No. 180796

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 79

TOPIC TAGS: polyamide, acid chloride, amino group, heat resistant polyamide

ABSTRACT: This Author Certificate introduces a method for preparing polyamides by polycondensation of dicarboxylic acid chloride a compound containing an amino group. To obtain heat-resistant polyamides, aminobenzoyl hydrazide is suggested as the compound containing the amino group. [LD]

SUB CODE: 11/ SUBM DATE: 25Jan65/

Card 1/1 MT UDC: 678.675' 4' 0

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M.

C-1

Comparison of the antimuscarinic effects produced by the optical isomers of camphor. A. M. Rusanov (Pediatric Med. Inst., Leningrad, U.S.S.R.). *J. Physiol.* (U.S.S.R.) 32, 283-6(1946)(in Russian).—The antimuscarinic effects of the isomers of camphor were studied by subcutaneously injecting a frog with solns. of arecoline and carbocholine. When the activity of the heart was arrested, an aq. soln. of camphor was injected subcutaneously and the time until resumption of heart activity was measured. Contrary to other reports, this investigation showed a marked difference in the capacity of the 2 isomers to restore the cardiac activity. The *d*-isomer was twice as rapid in its action as the *l*-form, and was 5 times as active.

S. Gottlieb

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M.

CA

11 M

Antagonism between prostigmine and strychnine. A. M. Rusanov (Pediatr. Med. Inst., Leningrad). *Fiziol. Zhur.* (J. Physiol.) 34, 297-8(1948).—White mice of both sexes (11-14 g. wt.) were subjected to subcutaneous injection of 0.5-1.3 γ/g. strychnine nitrate in 0.01% soln. Proserin (Russian prepn. analogous to prostigmine) was similarly introduced in 0.0005% soln. 10 min. before strychnine. LD_{50} on controls was 0.8, with no mortality only at 0.5 γ/g. dosage of strychnine; prostigmine gave no mortality up to 0.7 γ/g. of strychnine, and gave LD_{50} of 0.95. Large individual variations were observed.

G. M. Kosolapoff

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M.

Resistance of white mice to x-rays in various stages of development. Vest.i rad. no.3:17-19 My-Je '55. (MLRA 8:10)

1. Iz kafedry farmakologii (zav.chlen-korrespondent Akademii meditsinskikh nauk SSSR V.M.Karasik) Leningradskogo pediatricheskogo meditsinskogo instituta i Nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta.

(AGING, physiology
age factor in x-ray resist. in white mice)
(ROENTGEN RAYS, effects,
resist.,age factor in white mice)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M.

The effect of roentgen rays on reaction to narcotics in frogs. Vest. rent. i rad. no.5:26-29 S-O '55. (MLRA 9:1)

1. Iz kafedry farmakologii (zav.--chlen-korrespondent AMN SSSR V.M. Karasik) Leningradskogo pediatricheskogo meditsinskogo instituta i Nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta.

(NARCOTICS, eff.
on frogs, changing eff. of x-ray)
(ROENTGEN RAYS, eff.
on action of narcotics on frogs)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

Kashkin, K. P. On the Possibility of Adaptation of Bacterium Faecalis Alcaligenes to the Effect of Ionizing Radiation 350

Meter, I. P. Some Data on Causes of Unsuccessful Treatment of Radiation Disease With Antibiotics 360

Rabinovich, R. M. X-Ray-and-Anatomic Characteristics of Pulmonary Changes in Experimental Staphylococcic Pneumonia of Irradiated Animals 369

Petrov, I. R. [Member, Academy of Medical Sciences USSR], V. A. Bondina, and I. V. Ji'inskaya. Use of the Dextran-Type Synthetic Colloidal Solution in Combined Therapy of Radiation Sickness 376

Rusanov, A. M., G. A. Bel'shakova, and V. D. Lyashenko. Effect of Ganglioplegic Preparations [ganglioblitiki] on the Course and Outcome of Experimental Radiation Sickness 386

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

#69

Problems in Radiation Biology (Cont.) SOV/5435

topics are covered: various aspects of primary effects of radiation; the course of some metabolic processes in animals subjected to ionizing radiation; reactions in irradiated organisms; morphologic changes in radiation disease; and reparation and regeneration of tissues injured by irradiation. Some articles give attention to the effectiveness of experimental medical treatments. No personalities are mentioned. References accompany almost all of the articles.

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Gusterin, G. A., and A. I. Strashinin. Professor Mikhail Nikolayevich Pobedinskiy (Commemorating his Sixtieth Birthday) 5

Lebedinskiy, A. V. [Member, Academy of Medical Sciences USSR], N. I. Arlashchenko, and V. M. Mastryukova. On the Mechanism of Trophic Disturbances Due to Ionizing Radiation 11

Zedgenidze, G. A., [Member, Academy of Medical Sciences USSR], Ye. A. Zherbin, K. V. Ivanov, and P. R. Vaynshteyn. Hormonal Activity of the Adrenal Cortex in Acute Radiation Sickness and the Effect of Desoxycorticosterone Acetate on the Disease 17

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A. M.

69

PHASE I BOOK EXPLOITATION SOV/5435

Kiselev, P. N., Professor, G. A. Gusterin, and A. I. Strashinin, Eds.

Voprosy radiobiologii. t. III: Sbornik trudov, posvyashchennyy 60-letiyu so dnya rozhdeniya Professora M. N. Pobedinskogo (Problems in Radiation Biology. v. 3: A Collection of Works Dedicated to the Sixtieth Birthday of Professor M[ikhail] N[ikolayevich] Pobedinskiy [Doctor of Medicine]) Leningrad. Tsentr. n-issl. in-t med. radiologii M-va zdravookhrananiya SSSR, 1960. 422 p. 1,500 copies printed.

Tech. Ed.: P. S. Peleshuk.

PURPOSE: This collection of articles is intended for radiobiologists.

COVERAGE: The book contains 49 articles dealing with pathogenesis, prophylaxis, and therapy of radiation diseases. Individual articles describe investigations of the biological effects of radiation carried out by workers of the Central Scientific Research Institute for Medical Radiology of the Ministry of Public Health, USSR. [Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR] during 1958-59. The following

Card 1/10

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M.

"Pharmacological characteristics and efficiency of certain mercaptoamines in preventive treatment of radiation disease."

Presented at the Scientific Meeting on Diagnosis and Treatment of Acute Radiation Injury(IAEA) Geneva 17-21 Oct '60

Inst. of Radiobiology, Leningrad, USSR

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

MOZHAROVA, Ye.N.; RUSANOV, A.M.; KOMAROVA, R.S.

Use of batyl alcohol and leukogen in radiation leucopenia. Med. rad. no.9:13-16 '61. (MIRA 15:1)

1. Iz TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR.
(RADIATION SICKNESS) (LEUCOPENIA) (BATYL ALCOHOL)
(THIAZOLIDINECARBOXYLIC ACID)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A. M.

(c)

Influence of Ionizing Radiation on Processes of Cholinergic Stimulation

A. M. Rusanov, G. A. Bolshakova, A. V. Larovskya, G. N. Alekseeva and V. I. Skorobogatov

The influence of ionizing radiation was studied on processes of cholinergic stimulation in various links of the reflex arc (the central nervous system, vegetative ganglions, neuromuscular synapses) in animals exposed to single total-body X-ray irradiation (100–50000 r). Experiments were carried out on cats, rabbits, white mice and frogs with different tests and methods (electro-encephalography, determination of the summation of nervous impulses, record of contraction in the small intestine and isolated skeletal muscle, determination of cholinesterase activity and cellular respiration efficiency when using pharmacological agents and enzyme poisons).

The investigations established a decrease in cholinergic structure sensitivity to analgesics, neuroplegics and ganglioplytics, and an increase in cholinergic structure sensitivity to narcotics, anticholinesterasics, cholinmimetics, curare-like and local anaesthetic substances.

These changes have a phasic character and they depend on the functional ability of the cholinergic structure and the degree of radiation injury.

The changes in the irradiated animal are apparently due (in addition to other factors) to the breakdown of oxidative phosphorylation, the consequence of which may be the breakdown of the acetylcholine metabolism and a change of the cholinergic structure reaction to pharmacological agents.

The Central Research Institute of Medical Radiology of the Ministry of Health, Leningrad, USSR

report presented at the 2nd Intl. Congress of Radiation Research, Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

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I015/I215

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27.2400

AUTHORS: Rusanov, A. M., Mozharova, Ye. N., and Komarova, R. S.

TITLE: Chemicals employed in therapy of hemopoietic disorders due to ionizing radiation

PERIODICAL: Meditsinskaya radiologiya, v. 7, no. 2, 1962, 42–48

TEXT: The various drugs which have been tried for treating radiation leucopenia are not effective enough. This article deals with the results of experimental and clinical study of the therapeutic effect of leukogen (2-(alpha-phenyl-alpha-carbethoxymethyl)-thiazolidine-4-carbonic acid) and batylol (alpha-octodecyl-glycerol ether-called batyl alcohol) in whole body and local irradiation. Experiments were carried out on 425 female guinea pigs weighing 300–400 g. The animals were subjected to a whole-body irradiation of 300 r at a dose rate of 23–25 r/min from a PYM-3 (RUM-3) apparatus. Leukogen and batylol were administred orally or injected i.m. in doses of 0.1–50.0 mg/kg b.w. Hematologic examinations of peripheral blood and bone marrow were performed before and after irradiation. The leucopoietic effect of leukogen was greater than that of batylol in the healthy control animals but the therapeutic effect of batylol was greater than that of leukogen in the irradiated animals. Batylol not only increased hemopoiesis but also brought about a lighter course of radiation sickness. The clinical trial of these chemicals was tried on 67 patients who developed leucopenia

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following radiotherapy. Leukogen was administered to 36 patients, in tablets of 20 mg t.i.d. Batylol was given to 31 patients 20–40 mg 1–2 times a a day. The clinical experience also shows the advantages of batylol over leukogen. The possible mechanism of the effect of both chemicals is discussed. There are 4 figures.

ASSOCIATION. Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR (Central Institute of Medical Radiation Research, Ministry of Health USSR) Leningrad

SUBMITTED: November 21, 1961

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M.; BOL'SHAKOVA, G.A.

Pharmacology of Camphonium. Farm. i toks. 25 no.2:163-167 Mr-Ap '62. (MIRA 15:6)

1. Otdel eksperimental'noy terapii (zav. - prof. A.M. Rusanov) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR.
(AZABICYCLOOCTANE)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.M., prof.; NOVOSELOVA, G.S.

Pharmacology of aminoethylisothiuronium. Farm. i toks. 28 no.1:81-82 Ja-F '65. (MIRA 18:12)

1. Otdel radiatsionnoy farmakologii (zav. - prof. A.M.Rusanov) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR, Leningrad. Submitted October 23, 1963.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, A.S., polkovnik med. sluzhby. prof.

Forgotten priority. Voen.-med. zhur. no.11:95-96 N '56. (MIRA 12:1)
(INTESTINES--SURGERY)
(PIROGOV, NIKOLAI IVANOVICH, 1810-1881)

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Deposits of ozocerite in the Minusinsk basin. A. V. Rusanov. *Razvedka Nedr* 1939, No. 8, 4-10; *Khim. Referat. Zhur.* 1939, No. 12, 25 6.—Of 2 deposits in the Shirin region of the Khakassk Autonomous Province, one contained 14.53% of bitumen sol. in 95.5% benzene and showed signs of the presence of paraffinic compds. The bitumens of the Saplot deposits are similar to ozocerite. The Minusinsk basin contains combustible shales in the lower stratum of the middle Devonian period in the form of a single horizon. Shale from the Uchun deposits contained 0.18% bitumens. The compn. of the bitumen is similar to that of the Saplot deposits. Chem. analyses of the bitumens are presented. Besides shales there are present bituminous limestones in the Minusinsk basin.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B. A. PA 16T81

USSR/Engines, Internal Combustion Apr 1947
Engines - Performance

"Investigation of the Combustion Process in Internal Combustion Engines with Indicator Diagrams," B. A. Rusanov, 4 pp

"Energeticheskiy Byulleten'" No 4

The investigation enables one to determine the causes of lowered efficiency in Diesel engines and how to correct it.

16T81

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B. A.

USSR/Drilling Machinery May 1947
Petroleum-Well drilling

"Some Power Coefficients for Drilling Oil Holes with Portable Machines," I. I. Lokhov, B. A. Rusanov, 5 pp

"Energeticheskiy Byulleten'" No 5

Discussion, illustrated with a graph and tables, of operating data, leading to the conclusion that portable drilling units equipped with derricks are preferable for shallow drilling (down to 1000 meters) in both speed and economy.

PA 16T74

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B. A.

PA 16T77

USSR/Engines, Diesel
Refrigeration

Jun 1947

"Obtaining Refrigeration by Utilizing the Heat of Diesel Exhaust Gases," B. A. Rusanov, 3 pp

"Energeticheskiy Byulleten'" No 6

Discussion with formulae, schematic diagram, and operating data of a system for air-conditioning industrial plants in the southern USSR.

16T77

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B. A.

PA 66T45

USSR/Engineering Jan 1948
Power Plants, Diesel Electric
Systems, Air

"The Air Systems of Diesel Power Stations," B. A. Rusanov, GiproVostokNeft, 5 pp

"Energet Byul" No 1

Discusses role of the air systems at Diesel power stations. Air plays very important part: 1) for oxidizing the fuel within the cylinders, 2) vaporization of the fuel in compression-type Diesels, 3) exhausting of the cylinders in two-cycle engine, 4) starting the engines, and 5) technological

[redacted] 66T45

USSR/Engineering (Contd) Jan 1948

processes for reclaimed oil. Thus it can be seen that proper air supply is most important at Diesel power station. Briefly describes the highlights and requirements for each of the five above-mentioned facts.

[redacted] 66T45

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B. D.

Effect of recent uplifts and saline facies of rocks on the formation of the composition of underground waters as exemplified in the Szechwan complex artesian basin. Trudy Len. gidrometo. inst. no.11:243-253 '61. (MIRA 16:1)

(Szechwan, China—Water, Underground)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

HUSANOV, B.G.

Effect of the length of daylight on the growth of leaves, bulb formation and yield in the common onion. Uch.zap.Chuv.gos.ped. inst. no.7:133-137 '59. (MIRA 13:9)
(Onions) (Plants, Effect of light on)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B.G., kandidat sel'skokhozyaystvennykh nauk.

[redacted] I.V. Michurin on the practical activities of students. Biol. v shkole no.5:24-28 S-O '57. (MLRA 10:9)

1. Chuvashskiy gosudarstvennyy pedagogicheskiy institut.
(Agriculture--Study and teaching)
(Michurin, Ivan Vladimirovich, 1855-1935)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B.G., kand.sel'skokhozyaystvennykh nauk

How organic-mineral fertilizer mixtures help to improve soil moisture conditions and increase the yield of early cabbage. Agrobiologiia no.4:628-629 Jl-Ag '61. (MIRA 14:7)

1. Chuvashskiy gosudarstvennyy pedagogicheskiy institut imeni I.Ya. Yakovleva, Cheboksary.
(Cabbage—Fertilizers and manures) (Soil moisture)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

FURSAYEV, A.D.; RUSANOV, B.I.

Brief characteristics of the vegetation of artificial limans in the right-bank area of the lower Volga Valley. Uch. zap. Sar. un. 64:57-68 '59. (MIRA 13:9)
(Volga Valley--Pastures and meadows)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B.I.; SMELOV, A.A.

Physical properties of dikes in the Sayan group of deposits and central Kazakhstan. Izv. AN Kazakh.SSR.Ser.Geol. 22 no.5:76-81 S-O '65. (MIRA 18:12)

1. Kazakhskiy politekhnicheskiy institut i Kazakhskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta razvedochnoy geofiziki.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

GRUSHEVOY, V.G.; IVANOV, A.A.; KUREK, N.N.; LIBROVICH, L.S.; MOROZENKO, N.K.; NEKHOROSHEV, V.P.; RUSANOV, B.S.; SHABAROV, N.V.; SEMENOVA, M.V., red.izd-va; GORDIYENKO, Ye.B., tekhn.red.

[Instructions and conventional symbols for making mineral map of the U.S.S.R. on a 1:1 000000 scale] Instruktsiia i uslovnye oboznacheniia dlia sostavleniia karty poleznykh iskopaemykh SSSR masshtaba 1:1 000 000. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1955. 16 p. (MIRA 12:10)

1. Leningrad, Vsesoyuznyy geologicheskiy institut.
(Mines and mineral resources--Maps)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

ROZHKOV, I.S.; RUSANOV, B.S.; KREYTER, V.M., glavnyy red.; SHATALOV, Ye.T., red.vypuska; YEROFEYEV, B.N., red.; ZENKOV, D.A., red.; KRASNIKOV, V.I., red.; NIFONTOV, R.V., red.; SMIRNOV, V.I., red.; KHRUSHCHOV, N.A., red.; YAKZHIN, A.A., red.; VLASOVA, S.M., red.izd-va; AVERKIYEVA, T.A., tekhn.red.

[Methodological instructions on geological prospecting] Metodicheskie ukazaniia po proizvodstvu geologo-razvedochnykh rabot. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. No.1 [Prospecting for alluvial gold, platinum, tin, tungsten, titanium, tantalum, and niobium] Razvedka rossypnykh mestorozhdenii zolota, platiny, olova, vol'frama, titana, tantala i niobiia. 1957. 108 p. (MIRA 12:5)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Prospecting)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

Rusanov, B.S.

VOZNESENSKIY, D.V.; AMELANDOV, A.S.; GEYSLER, A.N.; GOLUBYATNIKOV, V.D.; [deceased]; DOMAREV, V.S.; DOMINIKOVSKIY, V.N.; DOVZHIKOV, A.Ye.; ZAYTSEV, I.K.; IVANOV, A.A ; ITSIKSON, M.I.; IZOKH, E.P., KNYAZEV, I.I.; KORZHENEVSKAYA, A.S.; MISHAREV, D.T.; SEMENOV, A.I.; MOROZENKO, N.K.; NEFEDOV, Ye.I.; RADCHENKO, G.P.; SERGIYEVSKIY, V.M.: SOLOV'YEV, A.T.; TALDYKIN, S.I.; UNKSOV, V.A.; KHABAKOV, A.V.; TSEKHOMSKIY, A.M.; CHUPILIN, I.I.; SHATALOV, Ye.T., glavnyy redaktor; KRASNIKOV, V.I., redaktor; MIRLIN, G.A., redaktor; RUSANOV, B.S, redaktor; POTAPOV, V.S., redaktor izdatel'stva; GUROVA, O.A., tekhnicheskiy redaktor.

[Instructions for organization and execution of geological surveys in scales of 1:50,000 and 1:25,000] Instruktsiia po organizatsii i proizvodstvu geologo-s"emochnykh rabot masshtabov 1:50,000 i 1:25,000. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. 1956. 373 p. (MLRA 10:6)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. (Geological surveys)

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GORNSHTEYN, D.K.; GUDKOV, A.A.; KOSOLAPOV, A.I.; LEYPTSIG, A.V.; MEL'NIKOV, V.M.; MOKSHANTSEV, K.B.; FRADKIN, G.S.; CHERSKIY, N.V.; TROFIMUK, A.A., akademik, nauchn. red. vyp.; POZHKOV, I.S., glav. red.; KOBELYATSKIY, I.A., zam. glav. red.; SHATALOV, Ye.G., zam. glav. red.; BONDARENKO, V.I., red.; GRINBERG, G.A., red.; YELOVSKIKH, V.V., red.; RUSANOV, B.S., red.; SEMENOV, G.T., red.; TKACHENKO, B.V., red.; KALANTAROV, A.P., red.izd-va; GUSEVA, A.P., tekhn. red.

[Basic stages of the geological development and prospects for finding oil and gas in the Yakut A.S.S.R.] Osnovnye etapy geologicheskogo razvitiia i perspektivy neftegazonosnosti IAkutskoi ASSR. [By] D.K.Gornshtein i dr. Moskva, Izd-vo AN SSSR 1963. 238 p. (MIRA 16:12)

(Yakutia--Petroleum geology)
(Yakutia--Gas, Natural--Geology)

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RUSANOV, B.S.

Development of aerial geological mapping in the U.S.S.R. Sov. geol. no.61:121-129 '57. (MIRA 11:4)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Aeronautics in geology)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

BOCH, S.G.; GRUSHEVOY, V.G.; DZEVANOVSKIY, Yu.K.; ZORICHEVA, A.I., IVANOV, A.A.; KUREK, N.N.; LIBROVICH, L.S.; MOROZENKO, N.K.; NEKHOROSHEV, V.P.; RUSANOV, B.S.; SPIZHARSKIY, T.N.; SHABAROV, N.V.; SHATALOV, Ye.T., redaktor; DZEVANOVSKIY, Yu.K.; redaktor; KRASNIKOV, V.I., redaktor; MIRLIN, G.A., redaktor; RUSANOV, B.S., redaktor; SEMENOVA, M.V., redaktor; GUROVA, O.A., tekhnicheskiy redaktor.

[Instruction for compiling and preparing for publication the state geological map of the U.S.S.R., and the map of the mineral resources of the U.S.S.R.Scale 1:1000000] Instruktsiia po sostavleniiu i podgotovke k izdaniiu gosudarstvennoi geologicheskoi karty SSSR i karty poleznykh iskopaemykh SSSR. Masshtaba 1:1000000. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1955. 52 p., tables of symbols, maps [Microfilm] (MLRA 9:6)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. (Geology--Maps)

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MUZYLEV, S.A.; PAFFENGOL'TS, K.N.; SHATALOV, Ye.T., glavnyy red.; KRASNIKOV, V.I., red.; MIRLIN, G.A., red.; MUZYLEV, S.A., red.; RUSANOV, B.S., red.; BABINTSEV, N.I., red.; GUROVA, O.A., tekhn.red.

[Instructions for the compilation and preparation of geological maps of mineral resources with a scale of 1:200,000; compulsory for geological organizations of ministries and agencies of the U.S.S.R.] Instruktsiia po sostavleniiu i podgotovke k izdaniiu geologicheskoi karty i karty poleznykh iskopaemykh, masshtaba 1:200,000; obiazatel'na dlia geologicheskikh organizatsii ministerstv i vedomstv SSSR. Instruktsiiu sost. S.A. Muzylev i K.N. Paffengol'ts. Red. kollegiia E.T. Shatalov i dr. Moskva, Gos. nauchno tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1955. 46 p. (MIRA 12:1)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr.
2. Vsesoyuznyy geologicheskiy nauchno-issledovatel'nyy institut (for Paffengol'ts).
(Cartography) (Geology--Maps)

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ROZHKOV, I.S.; RUSANOV, B.S.; KREYTER, V.M., glavnyy red.; SHATALOV, Ye.T., zamestitel' glavnogo red.; YEROFEYEV, B.N., red.; ZENKOV, D.A., red.; KRASNIKOV, V.I., red.; NIFONTOV, R.V., red.; SMIRNOV, V.I., red.; KHRUSHCHOV, N.A., red.; YAKZHIN, A.A., red.; VLASOVA, S.M., red.; AVERKIYEVA, T.A., tekhn. red.

[Prospecting for placer deposits of gold, platinum, tin, tungsten, titanium, tantalum, and niobium] Razvedka rossypnykh mestorozhdenii zolota, platiny, olova, vol'frama, titana, tantala i niobiia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1957. 108 p. (Metodicheskiy ukazaniia po proizvodstvu geologo-razvedochnykh rabot, no.12). (MIRA 11:1)

(Ore deposits)

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RUSANOV, B. S.

Session on the study of the distribution of placer deposits. Geol. rud. mestorozh. no.2:120-122 Mr-Ap '60. (MIRA 13:8)
(Ore deposits)

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RUSANOV, B. S.

"Aeromethods of Geomprphological Map Plotting When Searching for Mineral Fields."

dissertation defended for the degree of Cand. [redacted] of Geological-Mineralogical Sciences, at the Inst. for Geology. (Jan-Jul 1957)

Defense of Dissertations
Sect. of Geological-Geograhical Sci.
Vest. AN SSSR, 1957, vo. 27, no. 12, pp. 113-115

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, Boris Sergeyevich, kand. geologo-miner. nauk, laureat Stalinskoy premii; SHVETSOV, P.F., nauchnyy red.; KEL', N.G., nauchnyy red.; VIL'SHANSKIY, A.L., red.; POLYAKOV, M.G., tekhn. red.

[Hydrothermal movements of the earth's surface] Gidrotermicheskie dvizheniia zemnoi poverkhnosti. Moskva, Akad. nauk SSSR Iakutskii filial Sibirskogo otd-niia, 1961. 225 p. (MIRA 15:3)

1. Chleny-korrespondenty Akademii nauk SSSR (for Shvetsov, Kell').
(Earth movements) (Frozen ground)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446110016-7

RUSANOV, B.S.

BOCH, S.G.; GRUSHEVOY, V.G.; DZEVANOVSKIY, Yu.K.; ZORICHEVA, A.I., IVANOV, A.A.; KUREK, N.N.; LIBROVICH, L.S.; MOROZENKO, N.K.; NEKHOROSHEV, V.P.; RUSANOV, B.S.; SPIZHARSKIY, T.N.; SHABAROV, N.V.; SHATALOV, Ye.T., redaktor; DZEVANOVSKIY, Yu.K.; redaktor; KRASNIKOV, V.I., redaktor; MIRLIN, G.A., redaktor; RUSANOV, B.S., redaktor; SEMENOVA, M.V., redaktor; GUROVA, O.A., tekhnicheskiy redaktor.

[Instruction for compiling and preparing for publication the state geological map of the U.S.S.R., and the map of the mineral resources of the U.S.S.R.Scale 1:1000000] Instruktsiia po sostavleniiu i podgotovke k izdaniiu gosudarstvennoi geologicheskoi karty SSSR i karty poleznykh iskopaemykh SSSR. Masshtaba 1:1000000. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1955. 52 p., tables of symbols, maps [Microfilm] (MLRA 9:6)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. (Geology--Maps)

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RUSANOV, B.V.

34/910 532.582.3

Slow Unestablished Flow of Viscous Fluid Past a Circular Cylinder

B.V. Rusanov

Dokl.Akad.Nauk 89(6),983-986 1953

U.S.S.R.

In the consideration of an unestablished flow of viscous fluid around a circular cylinder the non-linear terms in the Navier-Stokes equation are neglected. It is further assumed that at the initial moment the distribution of velocity is symmetrical to some plane in which lies the axis of the cylinder. At infinity the flow is parallel, while elsewhere its motion is assumed to be plane. With the aid of Laplace transformation a full solution is obtained which satisfies the conditions of the singleness theorem. It also explains the absence of the established regime in a slow flow of viscous liquid around a cylinder. In conclusion it is suggested that the problem with non-symmetrical distribution of velocity can be solved by the same method, and that, moreover, the condition of the flow being parallel at infinity is not essential. In the same way the problem can be solved if certain conditions are imposed upon the character of a slow flow. (Bibl.1)

(See also Item 35/910)

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