

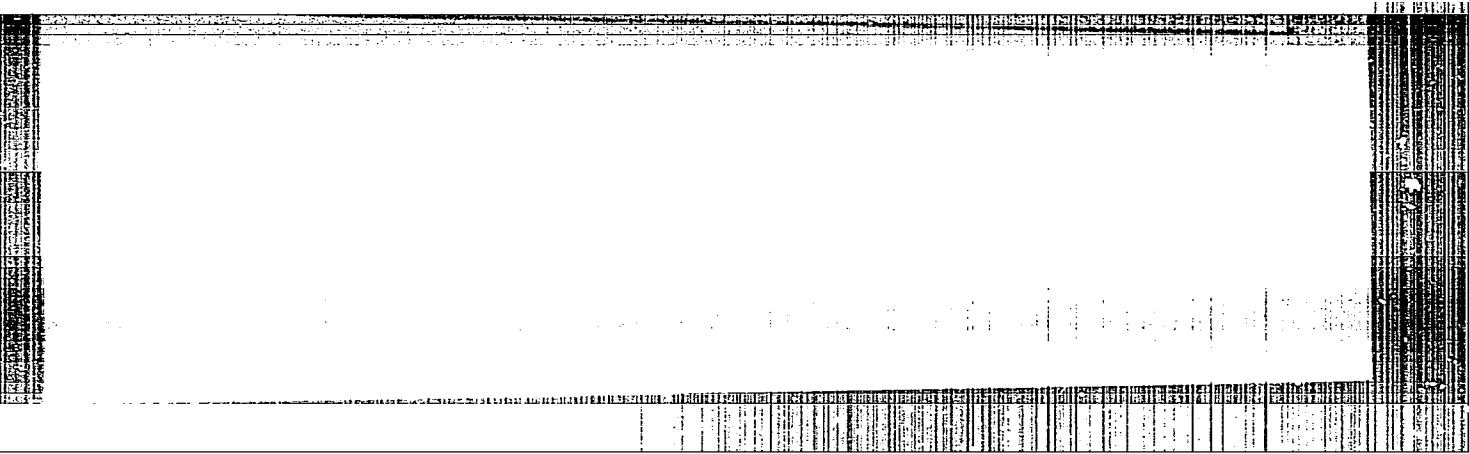
**"APPROVED FOR RELEASE: 08/10/2001**

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**APPROVED FOR RELEASE: 08/10/2001      CIA-RDP86-00513R000619010010-3"**

IVANKIN, P.F.; LIOGEN'KIY, S.Ya.

Electrical prospecting in the Rudnyy Altai. Vest.AN Kazakh.  
SSR 12 no.8:15-24 '56. (MLRA 9:12)

(Altai Mountains--Prospecting--Geophysical methods)

*Ivan Kin, P. F.*

USSR/Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26514.

Author : Ivankin, P. F.  
Inst : Scientific Research Institute of Mining  
and Metallurgy of Altai.

Title : Questions of Geological Development of  
Mining Region of Altai at the Irtysh.

Orig Pub : Tr. Altaysk. gorno-metallurg. n.-i. in-ta,  
1956, 3, 5 - 49.

Abstract : No abstract.

Card 1/1

IVANKIN, P.F., doktor geologo-mineralogicheskikh nauk.

Geological service of the Rudnyy Altai in the sixth five-year plan.  
Vest.AN Kazakh.SSR 12 no.4:8-13 Ap '56. (MLRA 9:8)  
(Altai Mountains--Geology, Economic)

IVANKIN, P.F.; MITRYEYeva, N.M.

Process of the development of copper and lead-zinc mineralization  
in the Nikolayevskoye deposits in the Altai. Izv.AN SSSR. Ser.  
geol. 21 no.9:27-43 S '56. (MLRA 9:11)

1. Altayskiy gorno-metallurgicheskiy nauchno-issledovatel'skiy  
institut, g. Ust'-Kamenogorsk, Kaz. SSR.  
(Altai Mountains--Iron ores)

IVANKIN, Petr Filippovich; SEMENOVA, M.V., red.izd-va; KRYNOCHKINA, K.V.,  
tekhn.red.

[Geology and genesis of complex metal deposits in the Irtysh River  
region] Geologiya i voprosy genezisa polimetallicheskih mestorozhde-  
nii Priirtysh'ia. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol.  
i okhrane neдр, 1957. 246 p. (MIRA 11:2)  
(Altai Mountains--Ore deposits)

IVANKIN, P.F.

11-7/23

SUBJECT: USSR/Geology

AUTHOR; Ivankin, P.F., and Purkin, A.V.

TITLE: "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye Rudnogo Altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)

PERIODICAL: "Izvestiya Akademii Nauk SSSR", Seriya Geologicheskaya, 1957, #4, pp 84-97 (USSR).

ABSTRACT: While the system of metallogenic zoning of the south-western territory of the Altay mountains by V.P. Nekhoroshev and P.P. Pilipenko had proved to be a valuable aid at prospecting in the past, these zoning schemes did not meet present requirements. Presently the question of origin of poly-metallic mineralization and its location gained great importance. Experience obtained at numerous large ore fields and deposits of sulfide ore has shown that assumptions of deposits can not be based solely on studies of respective geologic textures, but have to be based also on the knowledge of interrelations existing between the peculiarities of deposits and their geologic texture.

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22-7/23

TITLE:

"Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye rudnogo altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)

Lead-zinc and copper deposits within the Rudnoy Altay area are dispersed over a wide territory and overlie different stratigraphic complexes of the central Paleozoic era. The vertical extent is also considerable, the stratigraphic thickness being 6-7 km. It is of importance to note that mineralization took place on all known intrusions of magmatic rocks. Peculiarities of sulfide layers are depending largely on the geologic texture and tectonic development, the metamorphosis of rocks and other circumstances accompanying the sedimentation of ore. These peculiarities enable to differentiate the poly-metallic belt of Rudnoy Altay.

The following characteristics can be used for the classification of ore bearing geologic layers: the relation of ore fields and deposits to regional textures and geologic complexes, the inner texture of ore fields and deposits and the shape of the ore layers. According to these symptoms, sulfide deposits of the Rudnoy Altay can be subdivided into 3 basic groups: 1) Ore fields and deposits located beyond the direct influences of

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11-4-7/23

**TITLE:** "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Struktturno-metallogenicheskoye rayonirovaniye rudnogo altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot.)

regional wharping zones. 2) Ore fields and deposits located within the regional wharping zones, and 3) Ore fields and deposits located at some distance from the regional wharping zones.

The authors give a detailed account of the geologic peculiarities arising from the varying degree of deformation during and after the process of contortion.

The article contains 5 figures. The bibliography lists 10 references, of which 10 are Slavic (Russian)

**ASSOCIATION:** Trest "Altaytvetmetrazvedka" of the Ministry of Non-Ferrous Metallurgy of the Kazakh SSR. Altay Mining Metallurgic Institute of the Academy of Sciences, Kazakh SSR, city of Ust'-Kamenogorsk.

**PRESENTED BY:**

**SUBMITTED:** At the Session of TEKHSOVIET of the Ministry of Geology and Conservation of Natural Resources USSR, in conjunction with the Ministry of Non-Ferrous Metals and the Academy of Science of

Card 3/4

17-4-7/23

TITLE: "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye rudnogo altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)  
the Kazakh SSR, July 17, 1954.

AVAILABLE: At the Library of Congress.

Card 4/4

IVANKIN, P.F.; MITRYAYEVA, N.M.

Some results of structural and paragenetic studies of "Nikolayevskoye"  
sulfide deposits in the Altai. Trudy Alt. GONII AN Kazakh. SSR no.5:  
14-33 '57. (MIRA 11:4)

(Altai Territory--Sulfides)

IVANKIN, P.F.

11-10-21/23

AUTHOR: Ivankin, P.F.

TITLE: About the Book "Structural Geology" by G.D. Azhgirey (O knige G.D. Azhgireya "Strukturnaya Geologiya")

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, # 10, p 110-112 (USSR)

ABSTRACT: For a period of 15 years, after the publication of "Structural Geology" by M.A. Usov, no new books were published on this subject. Thus the publication of G.D. Azhgirey's book on the subject, published by Moscow University, 1956, meets a long felt demand. The book is richly illustrated with geologic plans, structural charts, various schematic drawings, and photographs. The author deals in detail with the geologic structures of the Caucasus, Kazakhstan and the Altay. The book is well edited and due to its ease of comprehensibility is suitable for a wide circle of industrial geologists.

SUBMITTED: 26 December 1957 (Note: Evidently a typographical error)

AVAILABLE: Library of Congress

Card 1/1

IVANKIN, P.F., doktor geologo-mineralogicheskikh nauk; KUZEBNYY, V.S.,  
kandidat geologo-mineralogicheskikh nauk.

Methods for petrographic and mineralogical study of ore zones  
in the Irtysh Valley. Vest. AN Kazakh. SSR 13 no.6:22-32 Je  
'57. (MLRA 10:9)

(Irtysh Valley--Ore deposits)

3(5) **THIS IS BOOK EXPLOITATION** 307/1886

Ob'yedineniyaya nauchnaya sessiya po metallogenicheskim i prognosnym kartam, Alma-Ata, 1958.

Materialy nauchnoy sessii po metallogenicheskim i prognosnym kartam i svedeniya (Materials Presented at the Scientific Session on Metallogenetic and Postulated Ore Occurrence Maps) Alma-Ata, Izdatel'stvo M. Kazakhskoy SSR, 1958. 318 p. Errata slip inserted. 3,850 copies printed.

Ed.: A.S. Pogozhev; Tech. Ed.: P.F. Alferova.

Sponsoring Agencies: (1) Akademiya nauk SSSR, (2) Akademiya nauk Kazakhskoy SSR, Alma-Ata, (3) USSR, Ministerstvo geologii i obratnykh zemedel'nykh resursov, (4) Kazakh SSR, Ministerstvo geologii i obratnykh zemedel'nykh resursov.

PURPOSE: This book is intended for exploration geologists, mining engineers, and cartographers.

307/1886

Materials Presented (Cont.)

CONTENTS: This collection of reports was presented at the United Scientific Session on Metallogeny and Postulated Ore Occurrence Maps sponsored by the Academy of Sciences in Alma-Ata in December, 1958. The reports deal with various aspects of compiling metallogenetic and ore occurrence maps as well as the methodology and techniques of correlating geophysical exploration data. These reports deal only with non-ferrous materials. Three other reports delivered at the conference but not included in this work were read by Ye.Ye. Zakharov, N.S. Shtatnyy, and Yu.K. Gorvatskiy. References accompany each article.

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Daklin, N.V. [Ural'skiye oz. MCOM]. Principles of Compiling Metallogenetic Maps for the Magmatic Deposits of the Urals	80
Aleshin, N.M., V.O. Parov. [Ural'skiye oz. MCOM]. Technique of Compiling of Copper and Iron Metallogenetic and Postulated Occurrence Maps for the Urals	88
Lazarev, V.V., I.V. Lamykh. [GU MCOM]. Copper and Nickel Postulated Occurrence Maps for Certain Districts of the Southern Urals	100
Izrael, E.Z., A.K. Kayurov, and G.M. Shcherba. [M Kazakh]. Metallogenetic Postulated Occurrence Maps of Rudnyy Altay in Central Kazakhstan	110
Shcherba, G.M. Postulated Occurrence Maps for Rare Minerals in Central Kazakhstan	119
Bot, I.I., and I.A. Miroshchikova [IGM AN KazSSR]. Polimetalnye Deposits of Central Kazakhstan and Guides for Predicting Their Occurrence and Exploration	131

Card 4/5

IVANKIN, P.F.

Genetic types and stages of the sulfide mineralization of the  
Rudnyy Altai. Zakonom. razm. polezn. iskop. 2:251-271 '59.  
(MIRA 15:4)

1. Altayskiy gorno-metallurgicheskiy nauchno-issledovatel'skiy  
institut AN Kazakhskoy SSR.  
(Altai Mountains--Ore deposits) (Sulfides)



AVROY, P.Ya.; AYTAIYEV, Zh. A.; AUEZOV, M.O.; AKHMEDSAFIN, U.M.; BATISHCHEV-  
PARASOV, S.D.; BAZANOVA, N.U.; BAISHEV, S.B.; BAYKONUROV, A.B.;  
BEKTUROV, A.B.; BOGATYREV, A.S.; BOK, I.I.; BORUKAYEV, R.A.; BUBLICHENKO,  
N.L.; BYKOVA, N.S.; ZHILINSEIY, G.R.; ZYKOV, D.A.; IVANKIN, P.F.;  
KAZANLI, D.N.; KAYUPOV, A.K.; KENESBAYEV, S.K.; KUMAYEV, D.A.;  
KUMAYEV, D.A.; KUSHEV, G.L.; LAYEV, V.V.; MASHANOV, O.Zh.; MUDOV,  
G.TS.; MONICH, V.K.; MUKANOV, S.; MUSREPOV, G.; MUKHAMEDZHANOV, S.N.;  
PARSHIN, A.V.; POFROVSKIY, S.H.; POLOSUKHIN, A.P.; RUSAKOV, M.P.;  
SERGIYEV, N.G.; SEYFULLIN, S.Sh.; TAZHIBAYEV, P.T.; EISENKOV, V.G.;  
SHLYGIN, Ye.D.; SHCHERBA, G.N.; CHOKIN, Sh.Ch.; CHOLPANKULOV, T.Ch.

Sixtieth birthday of Academician Kanysh Imantaevich Satpaev. Vest.  
AN Kazakh. SSR 15 no.4:58-61 Ap '59. (MIRA 12:7)  
(Satpaev, Kanysh Imantaevich, 1899-)

3(5)

AUTHOR:

Ivankin, P. F.

SOV/20-126-4-41/62

TITLE:

Zonality of the Pyrite Series in the Deposits of the Irtysh Crumpling Zone in the Altay (Zonal'nost' kolchedannogo ryada mestorozhdeniy Irtyshskoy zony smyatiya na Altaye)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 838 - 840 (USSR)

ABSTRACT:

The zone mentioned in the title - one of the most important zones in the south-western Altay - contains a large group of minable sulphide deposits. They formed in the Upper Paleozoic (Ref 2). The depth of their formation widely varied in different parts of the Irtysh zone, probably from 2-3 to 5-6 km and more. The deposits are "continuous" (skvoznoy) for all Paleozoic calcareous masses and show no direct genetic relations with the large intrusions of the Zmeinogorskiy complex. However, there exists a close spatial, structural, and chronological relation with the later small intrusions of the plagio-granite-porphyr, albitophyre, and porphyrites (Ref 2). This indicates a great depth of the deposits of the sulphide-fluorides. As was shown by the investigations of the author (Ref 2) special structural conditions for infiltration metasomatic processes (Ref 2)

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Zonality of the Pyrite Series in the Deposits of the SOV/20-126-4-41/62  
Irtysh Crumpling Zone in the Altay

existed in the Irtysh zone owing to a combination of perfect tectonic anisotropies (a plane parallel and a linear one). Under these conditions the mineralizing solutions flowing upwards formed compact rays which entered the zone of schists in a linear direction. For this reason enormously long (3-4 km) ore deposits of a band type are formed which are also included in narrow but very long (7-8 km and more) zones of rocks changed by the ore contact. The totality of the ore zones may be represented as a column. Transition formations (Refs 1,3,4) are found between the most extreme members: copper pyrrhotite and the polymetallic type. Independent of their position in the column the sulphide deposits formed in 2 main stages: a) in the pre-ore stage a strong metasomatic change of the containing rocks took place in the range of the band-shaped structures. b) in the second stage, the ore stage proper, the solutions, varying in their composition, (2-3 stages) deposited ores of non-ferrous metals and relatively small amounts of vein minerals. They fill pores, gaps etc. and form inclusions in ores by crystallizing mainly from the solution. The solutions of the pre-ore stage were first gas-

Card 2/3

Zonality of the Pyrite Series in the Deposits of the SOV/20-126-4-41/62  
Irtysh Crumpling Zone in the Altay

ous and diluted-hydrothermal. Sometimes they were strongly concentrated and sometimes they were capable of injection or of stripping of rocks. 3 main zones were separated: (from top to below): 1) the upper zone - with a strong predominance of the phenomena of deposition over the leaching of bases at low temperatures; 2) the intermediate zone of acidic leaching at mainly medium temperatures; 3) the lower zone of the high-temperature substitution of lateral rocks by magnesium. There are 4 Soviet references.

ASSOCIATION: Gorno-metallurgicheskiy nauchno-issledovatel'skiy institut Akademii nauk SSSR g. Ust'-Kamenogorsk (Mining-Metallurgical Scientific Research Institute of the Academy of Sciences, USSR, Ust'-Kamenogorsk)

PRESENTED: December 22, 1958, by D. S. Korzhinskiy, Academician

SUBMITTED: December 20, 1958

Card 3/3

IVANKIN, P.F.

Position of the Rudnyy Altai in the system of tectonic zones of the southwestern Altai, based on geological and geophysical data. Trudy Alt. GMI AN Kazakh.SSR 8:10-31 '60.  
(MIRA 13:7)

(Altai Mountains—Geology, Structural)

IVANKIN, P.F.; VEDERNIKOV, P.G.

Systematics and petrochemistry of igneous complexes in the  
southwestern Altai. Trudy Alt.GMNII AN Kazakh.SSR 8:44-69  
'60. (MIRA 13:7)  
(Altai Mountains--Rocks, Igneous)

IVANKIN, P.F.; INSHIN, P.V.

Metallogenetic stages and genetic types of the endogenous mineralization in the Rudnyy Altai. Trudy Alt.GMNII AN Kazakh.SSR 8:70-83 '60. (MIRA 13:7)  
(Altai Mountains--Ore deposits)

IVANKIN, P.F.; KUZEBNYY, V.S.; INSHIN, P.V.

Contact changes as indications in ore prospecting as exemplified by the exploratory work in the Irtysh Valley portion of the Altai ore region. Trudy Alt.GMNII AN Kazakh.SSR 8: 84-93 '60. (MIRA 13:7)  
(Irtysh Valley--Ore deposits)  
(Prospecting)



VOROB'YEV, Yu.Yu.; IVANKIN, P.F.; KUZEBNYY, V.S.; LIKHODED, R.Ya.

Relationship between the hydrothermal metamorphism and  
sulfide mineralization in the Berezovskiy-Belousovskiy ore  
region. Trudy Alt.GMNI AN Kazakh.SSR 8:126-145 '60.  
(MIRA 13:7)

(Altai Mountains--Sulfides)  
(Metamorphism(Geology))

IVANKIN, P.F.; MITRYAYEVA, N.M.; PURKINA, Z.A.

Types of ores and stages in the ore formation in the  
Novoberezovskoye deposit. Trudy Alt.GMNII AN Kazakh.SSR  
8:146-169 '60. (MIRA 13:7)  
(Altai Mountains--Sulfides)

IVANKIN, P.F.; KUZEBNYY, V.S.

Upper age limit and depth of formation of ore in the Nikolayevsk  
deposit in the Altai. Vest.AN Kazakh.SSR 16 no.1:36-43 Ja  
'60. (MIRA 13:5)

(Altai Mountains--Ore deposits)

GORZHEVSKIY, D.I.; IVANKIN, P.F.

Geotectonic position of the Rudnyy Altai and Kalba Range based on geological and geophysical data. Izv. AN SSSR. Ser. geol. 25 no.4: 26-40 Ap '60. (MIRA 13:11)

1. L'vovskiy gosudarstvennyy universitet, Gorno-metallurgicheskiy institut AN KazSSR, g. Ust'-Kamenogorsk.  
(Altai Mountains--Geology, Structural)

IVANKIN, P.F.; LIIGEN'KIY, S.Ya.

Characteristics of the regional magnetic field in the Rudnyy Altai  
and problems relative to mapping it. Geol. rud. mestorozh. no.5:72-  
81 S-O '60. (MIRA 13:10)

1. Vsesoyuznyy geologicheskly nauchno-issleodvatel'skiy institut,  
Leningrad.

(Altai Mountains--Magnetism, Terrestrial--Maps)

IVANKIN, P.F.

Genetic types and stages of sulfide mineralization in Rudny  
Altai. Trudy Alt. GMNII AN Kazakh. SSR. 9:29-49 '60. (MIRA 14:6)

1. Altayskiy gornometallurgicheskiy nauchno-issledovatel'skiy  
institut AN Kazakhskoy SSR.  
(Altai Mountains--Sulfides)

IVANKIN, Petr Filippovich, doktor geologo-miner. nauk; INSHIN, Pavel Viktorovich; RUZHENNY, Valentin Stepanovich; POGOZHEV, A.S., red.; ALFEROVA, P.F., tekhn. red.

[Ore formations of the Rudnyy Altai] Rudnye formatsii Rudnogo Altaia. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR, 1961. 285 p.  
(MIRA 15:2)

(Altai Mountains--Ore deposits)

ABDULLAYEV, Kh.M.; ALYAVDIN, V.F.; AMIRASLANOV, A.A.; ANIKEYEV, N.P.;  
ARAPOV, Yu.A.; BARSANOV, G.P.; BELYAYEVSKIY, N.A.; BOKIY, G.P.;  
BORODAYEVSKAYA, M.B.; GOVOROV, I.N.; GODLEVSKIY, M.N.; SHCHEGLOV, A.D.;  
SHAKHOV, F.N.; SHILO, N.A.; YARMOLYUK, V.A.; DRABKIN, I.Ye.;  
YEROFEYEV, B.N.; YERSHOV, A.D.; YVANKIN, P.F.; ITSIKSON, M.I.;  
KARPOVA, Ye.D.; KASHIN, S.A.; KASHKAY, M.A.; KORZHINSKIY, D.S.;  
KOSOV, B.M.; KOTLYAR, V.N.; KREYTER, V.M.; KUZNETSOV, V.A.; LUGOV,  
S.F.; MAGAK'YAN, I.G.; MATÉRIKOV, M.P.; ODI NISOV, M.M.; PAVLOV, Ye.S.;  
SATPAYEV, K.I.; SMIRNOV, V.I.; SOBOLEV, V.S.; SOKOLOV, G.A.; STRAKHOV,  
N.M.; TATARINOV, I.M.; KHRUSHCHOV, N.A.; TSAREGRADSKIY, V.A.;  
CHUKHROV, F.V.

In memory of Oleg Dmitrievich Levitskii; obituary. Sov.geol. 4  
no.5:156-158 My '61. (MIRA 14:6)  
(Levitskii, Oleg Dmitrievich, 1909-1961)



IVANKIN, P.F.

The problem of small intrusion clusters and hydrothermal streams in  
pyrite-polymetallic ore fields of the Rudnyy Altai. Dokl. AN SSSR 138  
no.4:897-899 Je '61. (MIRA 14:5)

1. Altayskiy gorno-metallurgicheskiy institut AN KazSSR. Predstavleno  
akademikom D.S. Korzhinskim.  
(Altai Mountains—Ore deposits) (Metasomatism)

IVANKIN, P.E.

Complex metal deposits in the Argun Valley. Trudy ZbtNII no.18-26  
'62. (MIRA 18:2)

IVANKIN, P.F.

Magmatic activity and regularities in the spacial distribution of copper and complex ore deposits in the Rudnyy Altai. Zakonom. razm. polezn. iskop. 5:190-206 '62. (MIRA 15:12)

1. Altayskiy gorno-metallurgicheskiy institut AN Kazakhskoy SSR.  
(Altai Mountains—Ore deposits)

VOLKOV, V.M.; VOROB'YEV, Yu.Yu.; IVANKIN, P.F.; STUCHEVSKIY, N.I.

Experience and methods of large-scale prediction in the Berezovo-  
Belousovka ore deposit. Trudy Alt.GMNII AN Kazakh.SSR 12:37-48  
'62. (MIRA 15:8)

(Altai Mountains--Ore deposits)

IVANKIN, P.F.; MALYGIN, A.A.

Method of interpretation and systematics of magnetic anomalies  
as revealed by the studies in the Leninogorsk region. Trudy Alt.  
GMNII AN Kazakh.SSR 12:49-55 '62. (MIRA 15:8)  
(Leninogorsk region (Altai Mountains)--Magnetic anomalies)

IVANKIN, P.F.; LYUBETSKOY, V.N.

Block structure of the complex metal belt in the southwestern  
Altai. Sov.geol. 5 no.6:77-93 Je '62. (MIRA 15:11)

1. Vostochno-Kazakhstanskoye geologicheskoye upravleniye.  
(Altai Mountains--Ore deposits)

VEDERNIKOV, P.G.; IVANKIN, P.F., doktor geologo-mineralogicheskikh nauk;  
SHNAYDER, M.S.

Recent data on small intrusions and sulfide mineralization in the  
upper Paleozoic coal-bearing stratum of the Rudnyy Altai. Vest.AN  
Kazakh.SSR 18 no.3:35-42 Mr '62. (MIRA 15:3)  
(Altai Mountains--Ore deposits)

IVANKIN, P.F.

Origin of mineralized breccias in some pyrite-type deposits of  
the Altai and the Urals. Dokl. AN SSSR 142 no.2:422-424 Ja  
'62. (MIRA 15:2)

1. Altayskiy gorno-metallurgicheskiy institut AN KazSSR.  
Predstavleno akademikom D.S.Korzhimskim.  
(Altai Territory---Breccia)  
(Ural Mountains---Breccia)



VOROB'YEV, Yu.Yu.; IVANKIN, P.F., otv. red.; KROTOVA, I.Ye.,  
red.izd-va; IYERUSALIMSKAYA, Ye., tekhn. red.

[Geologic and genetic characteristics and zoning of the  
Irtysh complex metal deposit in the Altai] Geologo-  
geneticheskie i zonal'nost' irtyshskogo polimetallicheskogo  
mestorozhdeniia na Altae. Moskva, Gosgeoltekhizdat, 1963.  
125 p. (MIRA 16:5)

(Altai Mountains—Ore deposits)

IVANKIN, P.F.

Morphological types of clusters of small intrusives and hydrothermal jets. Dokl. AN SSSR 149 no.4:925-927 Ap '63. (MIRA 16:3)

1. Gorno-metallurgicheskiy nauchno-issledovatel'skiy institut AN KazSSR. Predstavleno akademikom D.S.Korzshinskim.  
(Mining geology)

IVANKIN, P.F.; INSHIN, P.V.; KUZEBNYY, V.S.

Genetic types of quartzites in the Rudnyy Altai. Trudy Alt.GMNI  
AN Kazakh.SSR 16:46-56 '63.

(MIRA 17:10)

IVANKIN, P.F.; KUZEBNYY, V.S.; VEDERNIKOV, P.G.

Skarn deposits in the northwestern part of the Rudnyy Altai.  
Trudy Alt.GMNII AN Kazakh.SSR 16:81-92 '63.

(MIRA 17:10)

IVANKIN, P.F.

Closed explosions accompanying hypabyssal intrusions and their role in the formation of ore deposits. Geol. i geofiz. no.10:23-33 '65. (MIRA 18:12)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya, Novosibirsk. Submitted January 7, 1965.

BASALAYEV, A.A., polkovnik meditsinskoy sluzhby; PRIKHOD'KO, G.F.,  
podpolkovnik meditsinskoy sluzhby; IVANKIN, P.K., podpolkovnik  
meditsinskoy sluzhby

Cases of tonsillitis of adenoviral etiology. Voen.-med. zhur.  
no.2:48-49 '65. (MIRA 18:11)

238T84

IVANKIN V.

USSR/Electronics - Television Receivers  
Measuring Instruments

May 52

"An Oscillator-Indicator for Tuning Television Re-  
ceivers," V. Ivankin

"Radio" No 5, p 50

The oscillator-indicator described is designed for tuning the video and sound channels of straight amplification TV receivers and also the input circuits and i-f stages of superhets. The oscillator has a range of 40-75 Mc and the scale is calibrated in 0.1-Mc steps.

238T84

IVANKIN, V.I., inzhener.

Phase meter. Energetik 1 no.3:19-20 Ag '53.

(MLRA 6:8)  
(Electric meters)





IVANKIN, V. K.

IVANKIN, V. K.

PYATILETNIY PLAN KOLKHOZA "ISKRA" NA 1951-1955, GODY (THE FIVE-YEAR PLAN OF THE KOLKHOZ "ISKRA" FOR 1951 TO 1955, BY) P. A. KAL'M, V. F. PAZENKOV, V. K. IVANKIN (IDR.) MOSKVA, SEL'KHOZGIZ, 1952. 221 P. ILLUS., DIAGRS., TABLES.

N/5  
783.3  
.K1

Name: IVANKIN, Vasilii Kirillovich

Dissertation: Metabolism and energy in geese and  
basis of the method of evaluating the  
general nutritiousness of fodder for  
fowl

Degree: Doc Agr Sci

Affiliation: [not indicated]

Defense Date, Place: 19 Jun 56, Council of Leningrad Agr  
Inst

Certification Date: 6 Jul 57

Source: BMVO 18/57

KARNAUKHOV, Ivan Prokof'yevich, dots.; ~~IVANKIN, Vasily Kirillovich,~~  
prof.; VERESOV, Konstantin Nikolayevich, dots.; ~~BONDARENKO,~~  
Nikolay Vasil'yevich, dots.; NIKISHIN, Konstantin  
Georgiyevich, dots.; LANGE, K.P., kand. sel'khoz. nauk, dots.  
retsenzent; MERKULOV, M.P., kand. sel'khoz. nauk, dots.,  
retsenzent; NOVIKOV, A.A., kand. sel'khoz. nauk, dots.,  
retsenzent; NOSUL'KO, I.M., st. prepod., retsenzent; SAFRONOVA,  
O.G., st. prepod., retsenzent; YEFIMOV, A.L., red.

[Fundamentals of agriculture] Osnovy sel'skogo khoziaistva.  
3. perer. izd. Moskva, Prosveshchenie, 1965. 646 p.

(MIRA 18:3)

1. Kuybyshevskiy pedagogicheskiy institut (for Lange, Merkulov).
2. Orlovskiy pedagogicheskiy institut (for Novikov, Nosul'ko, Safronova).

IVANKIN, V.P.

Study of holes by the neutron gamma method. Uch.zap. SGU 74:  
311-317 '60. (MIRA 15:7)  
(Oil well logging, Radiation)

IVANKIN, V.P.

Nonlinear apparatus for radiation logging. Razved.i prom. geofiz.  
no.45:118-122 '62. (MIRA 15:11)  
(Oil well logging, Radiation--Equipment and supplies)

IVANKIN, V.I.

Determining the volume of a well with a caliper log. Razved. i  
prom. geofiz. no. 49:130-133 '63 (MIRA 17:7)

IVANKIN, V.P.; BELYCHEVSKIY, Yu.M.

Determining the nonlinearity of radioactive logging apparatus.  
Razved. i prom. geofiz. no.50:119-120 '63.

(MIRA 18:3)



IVANKIN, V.P.

Some problems of the methods of the radiometric study of wells.  
Trudy NVNIIGG no.1:145-163 '64. (MIRA 18:6)

IVANKIN, Ya.I.; KOVALEVSKIY, P.P.; BIDULYA, V.I.; TSUKUR, I.D.

Improving the control of apparatus for industrial gamma-ray  
flaw detection. Zav.lab. 23 no.9:1127-1128 '57. (MIRA 10:12)

1.Dnepropetrovskiy zavod metallurgicheskogo oborudovaniya.  
(Materials--Testing)

IVANKIN, Ya. I.

**AUTHOR:** Ivankin, Ya.I., Kovalevskiy, P.P., Bidulya, V.I., 32-9-29/43  
Tsukur, I.D.

**TITLE:** *Perfectioning of the Control of Apparatus for Industrial Gamma Defectoscopy (Usovershenstvovaniye upravleniya apparatov dlya promyshlennoy gamma-defektoskopii)*

**PERIODICAL:** *Zavodskaya Laboratoriya*, 1957, Vol.23, Nr 9, pp.1127-1128 (USSR)

**ABSTRACT:** The apparatus GUP-Co-5-1 and GUP-Co-50-1, which are being produced by the "Mosrentgen" plant, have an important disadvantage in that the switchboard for the radioactive source is mounted immediately on the understructure of the device near the protective shield of the preparation. Here a new construction, in which the switchboard is fitted on a separate table, is described. By making use of a cable of 21 m length, which connects the apparatus with the operator stand, and of an operating stand of 7 m length, the person operating controls is able to work at a distance of 28 m from the source from an open stand, so that full safety is warranted. There is 1 figure.

**ASSOCIATION:** Dnepropetrovsk Plant for Metallurgical Equipment (Dnepropetrovskiy zavod metallurgicheskogo oborudovaniya)

**AVAILABLE:** Library of Congress  
Card 1/1

POLUKHIN, P.I.; BERKOVSKIY, V.S.; OSADCHIY, A.N.; STETSENKO, N.V.;  
AFRUNIN, P.M.; IVANKIN, Yu.I.

Oval and edged oval system of roll passes on tandem light  
section mills for rolling high alloy steel. Stal' 25  
no.4:337-341 Ap '65. (MIRA 18:11)

1. Moskovskiy institut stali i splavov i Zavod "Dneprospeetsstal".

IVANKINA, A.T.; MOROZOVA, A.A.

Plotting a detailed frequency section from neutron-gamma log  
diagrams. Razved. i prom. geofiz. no. 34:22-28 '60.  
(MIRA 13:12)  
(Saratov Province—Oil well logging, Radioactive)

IVANKINA, A.T.

Structure of media close to seismic boundaries in the Volga  
Valley portion of Saratov Province. Trudy NVNIIGG no.1:126-129  
'64.

Determination of the velocity of the distribution of elastic  
waves from the curves of neutron gamma logging. Ibid.:129-131

(MIRA 18:6)

ACC NR: AR6033759 SOURCE CODE: UR/0081/66/000/018/P014/P014

AUTHOR: Chesnokov, A. A.; Ivankina, E. B.; Brendas, V. P.

TITLE: Influence of naphthenes on the deparaffination process of residual raffinates

SOURCE: Ref. zh. Khimiya, Part II, Abs. 18P97

REF SOURCE: Tr. Kuybyshevsk. n.-i. in-t neft. prom-sti, vyp. 32, 1965, 86-96

TOPIC TAGS: hydrocarbon, mineral oil, deparaffination, petroleum product

ABSTRACT: The influence of naphthene hydrocarbons on the deparaffination process was studied. Residual raffinate (RA) of industrial manufacture (RA density, 0.883; viscosity, 18.69 centistoke at 100C) was used as raw material. Naphthene hydrocarbons (density, 0.8678—0.8775; viscosity, 15, 18, 17.38 centistoke at 100C; viscosity index 110—100) were separated from the RA by adsorption and then added to the initial RA in the amount of 1 to 20%. The mixtures then deparaffinized. It is shown that even an insignificant increase in the naphthene content in RA, increases filtration rate 1.5 times, while an increase to 10—20% raises the filtra-

Card 1/2

ACC NR: AR6033759

tion rate 2—2.5 times. The yield of deparaffinated oil from the potential content in RA increases by 2%. A clearly visible crystal formation of solid hydrocarbons is observed during the deparaffination process. The performance indices improve through the reduction of the concentration of solid hydrocarbons and tars. The problem of RA deparaffination with the recirculation of deparaffinated oil is then examined. After the addition of 5 and 7% of oil, the RA filtration rate during deparaffination increased by 40 and 63%, respectively. The oil yield remained unchanged. M. Rozhkov. [Translation of abstract] [GC]

SUB CODE: 11/

Card 2/2



ACC NR: AR6033759 SOURCE CODE: UR/0081/66/000/018/P014/P014

AUTHOR: Chesnokov, A. A.; Ivankina, E. B.; Brendes, V. P.

TITLE: Influence of naphthenes on the deparaffination process of residual raffinates

SOURCE: Ref. zh. Khimiya, Part II, Abs. 18P97

REF SOURCE: Tr. Kuybyshevsk. n. -i. in-t neft. prom-sti, vyp. 32, 1965, 86-96

TOPIC TAGS: hydrocarbon, mineral oil, deparaffination, petroleum product

ABSTRACT: The influence of naphthene hydrocarbons on the deparaffination process was studied. Residual raffinate (RA) of industrial manufacture (RA density, 0.883; viscosity, 18.69 centistoke at 100C) was used as raw material. Naphthene hydrocarbons (density, 0.8678—0.8775; viscosity, 15, 18, 17.38 centistoke at 100C; viscosity index 110—100) were separated from the RA by adsorption and then added to the initial RA in the amount of 1 to 20%. The mixtures then deparaffinized. It is shown that even an insignificant increase in the naphthene content in RA, increases filtration rate 1.5 times, while an increase to 10—20% raises the filtra-

Card 1/2

ACC NR: AR6033759

tion rate 2—2.5 times. The yield of deparaffinated oil from the potential content in RA increases by 2%. A clearly visible crystal formation of solid hydrocarbons is observed during the deparaffination process. The performance indices improve through the reduction of the concentration of solid hydrocarbons and tars. The problem of RA deparaffination with the recirculation of deparaffinated oil is then examined. After the addition of 5 and 7% of oil, the RA filtration rate during deparaffination increased by 40 and 63%, respectively. The oil yield remained unchanged. M. Rozhkov. [Translation of abstract] [GC]

SUB CODE: 11/

Card 2/2

TITLE: Stability of transformer oil in relation to the nature of the crude

SOURCE: Nefteper rabotka i neftekhimiya, no. 11, 1964, 15-17

TOPIC TAGS: transformer oil, Tuymazy\* petroleum, hydrogenated petroleum, Mulchanov  
Asstashevskiy, Z. rnoy, petroleum, transformer oil acidity

Card 1/2

L 22. 2-07  
ACCESSION NR: AP4049830

5

S. M. Smirnova and technicians L. I. Chubrikova and M. S. Bugrovskaya took part in the experimental work." Orig. art. has: 1 table.

ASSOCIATION: KNINP; Novokuybyshhevskiy zavod (Novokuybyshhev Plant)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP

NO REF SOV: 006

OTHER: 000

BADYSHTOVA, K.M.; CHESNOKOV, A.A.; IVANKINA, E.B.; ZHADANOVSKIY, N.B.;  
KONYUKHOVA, M.V. Primalni uchastiye: KOVALOV, B.S., inzh.;  
NAUMOVA, A.P., inzh.; PYATILETOVA, N.I., inzh.; SMIRNOVA, S.M.,  
inzh.; CHIBRIKOVA, L.I., laborant; BUGROVSKAYA M.S., laborant.

Effect of the nature of raw stock on the stability of transformer  
oil. Nefteper. i neftekhim. no.11:15-17 '64 (MIRA 18:2)

1. Gosudarstvenny nauchno-issledovatel'skiy institut neftyanoy  
promyshlennosti , Kuybyshev i Novokuybyshevskiy zavod.

L 22483-66 EWT(m)/T DJ  
ACC NR: AP6007929 (A)

SOURCE CODE: UR/0065/66/000/003/0030/0002

AUTHOR: Chesnokov, A. A.; Badyshtova, K. M.; Konyukhova, M. V.; Ivankina, E. B.;  
Zhadanovskiy, N. B. 32 B

ORG: KNIINP; Novokuybyshev Petrochemical Works (Novokuybyshevskiy neftekhimicheskiy kombinat)

TITLE: Antioxidative stability<sup>11</sup> of hydrofined transformer oil<sup>11</sup>

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 3, 1966, 30-32

TOPIC TAGS: transformer oil, petroleum product, petroleum refining, oxidative degradation, oxidation

ABSTRACT: The oxidative stability of hydrofined paraffin-free transformer oil was investigated using a sample with the following characteristics: kinematic viscosity (in cSt) at 20°C--24.45, at 50°C--8.01; 0.14 percent precipitate after oxidation treatment; acid number after oxidation (in mg KOH/g)--0.81; flash point in a closed crucible--150°C; pour point-- -43°C; transparent at +5°C; density at 20°C--0.8840; refractive index  $n_D^{20}$ --1.4980; sulfur content--0.18%. The oil was chromatographically separated into 6 narrow cuts. Several blends were prepared and their characteristic indices were compared with those of the starting transformer oil. It was found that reduction in the content of the high molecular weight aromatics results in lower antioxidative

UDC: 665.521.54 2

Card 1/2

L 22483-66

ACC NR: AP6007929

stability of the transformer oil. Antioxidative stability increased with reduction in gum content in the transformer oil. Orig. art. has: 3 tables. 0

SUB CODE: 21, 11    SUBM DATE: 00/    ORIG REF: 006/    OTH REF: 001

Card 2/2 BK

Physicochemical analysis of the system phenylmercuric bromide-benzaldehyde. F. F. Palzullin, L. S. Druzhina, and L. I. Ivankina. *Uchenye Zapiski Kazan. Univ.* 113, No. 8, 1954, 1383. Referat. *Zhur., Khim.* 1954, No. 27492.  
-Density, viscosity, surface tension, and  $n$  were studied for the system PBr<sub>2</sub>-BzH. The  $d$ . (at 30 and 50°) isotherms were curves bent toward the compn. axis which indicated contraction in the system. Deviation of the property curves from additive straight lines was noted, as well as deviations of the surface-tension curves from the Stakhovskii additive curve. In all cases it corresponded to a compn. of 75 mol. % BzH. Thus, on consideration of shape of  $d$ ., viscosity, surface tension, and  $n$  isotherms it is concluded that the compnd. PBr<sub>2</sub>·3BzH is formed. M. Hosh

*Handwritten signature*



SOV/112-58-2-1854

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 2, p 9 (USSR)

AUTHOR: Ivanskaya, M. S. and Gorodetskiy, A. F.

TITLE: Electric Strength of NaCl-KCl System Solid Solutions  
(Elektricheskaya prochnost' tverdykh rastvorov sistemy NaCl-KCl)

PERIODICAL: Izv. Tomskogo politekhn. in-ta, 1956, Vol 91, pp 159-164

ABSTRACT: Electric strength and microhardness of single crystals of NaCl-KCl solid solutions have been measured. Effect of composition on electric strength is represented by a curve that has a minimum, and effect on the microhardness by a curve that has a maximum in the region of equal contents of the components. Electric strength values are compared with the values of formation heat and surface energy. An inference is drawn that electric strength decreases with the decrease in system durability. Bibliography: 12 items. Tomskiy politekhnich. in-t (Tomsk Polytechnic Institute), Tomsk.

A. A. V.

Card 1/1

IVANKINA, M.S.

Ivankina, M.S. [Tomskiy politekhnicheskii institut (Tomsk Polytechnical Institute)] Measuring the Heat of Formation in KCl-KBr and KCl-NaCl Solid Solutions

(The Physics of Dielectrics, Transactions of the All-Union Conference on the Physics of Dielectrics) Moscow, 1966, No. 45, 225 p. 1100 copies printed.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in August 1966, sponsored by the "Physics of Dielectrics" Laboratory of the Physicotechnical Institute of the USSR Academy of Sciences (Physics Institute item 1000) of the AS USSR, and the Electrophysics Department of the Dnepropetrovsk Polytechnical University (Dnepropetrovsk State University).

IVANKINA, M.S.

AUTHOR: Kuchin, V. D., Candidate of Technical Sciences SOV/105-58-7-25/32

TITLE: Conference on Solid Dielectrics and Semiconductors (Konferentsiya po tverdyim dielektrikam i poluprovodnikam)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 85 - 86 (USSR)

ABSTRACT: The conference took place from February 3<sup>rd</sup> to February 8<sup>th</sup>, 1958, in the Tomsk Polytechnical Institute (Tomskiy politekhnicheskiy institut), Section of Properties of Dielectrics. Professor A.A.Vorob'yev (TPI) reported on the great number of investigations in the theory of ionic dielectrics, of crystallization, of the mechanical and electric properties of dielectrics and practical insulation. He showed that the properties of the binary compounds are divided into two groups: the one group of properties increases with increasing lattice energy, the other is reduced. Docent M.S.Metsik, Irkutsk University (Irkutskiy universitet) developed a theory according to which the cleavage-work in mica crystals is composed of the work against the dipole forces and the work for the separation of the double layer and in the last stage results in an electrostatic mosaic. Docent N.I. Vorob'yev (TPI) reported on the results of the investigation of

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Conference on Solid Dielectrics and Semiconductors SOV/105-58-7-25/32

dielectric constant, of the losses, the electric strength, and the specific volume resistance under temperature influence, moisture, tropical conditions, in the corona products "fluoroplast-4", "fluoroplast-3", polyethylene, polymonochlorostyrene, "product-10", thermoreactive compounds, and urethane. M.S.Ivankina (TPI) measured the factor of linear expansion and the heat produced in the formation of solid solutions of the KCl - RbCl, KCl - KBr - and NaCl - NaBr system in dependence on the composition in the range of from 25 to 100° C. A. N.Kislina (TPI) found that the simple relations between the physical and chemical properties of the monocrystals of alkali-halide salts and their electrical strength (as described previously in the papers of A.A.Vorob'yev), are not always established in the case of solid solutions. Docent P.A.Savintsev and others (TPI) found that the strength of alkali-halide solutions determined according to the method of boring and mutual grinding increases with increasing molecular concentration its change according to its composition following a curve with a minimum. Docent V.V.Puchkovskiy, Chelyabinsk Institute of Mechanization and Electrification of Agriculture (Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva) by means of experiments found that the dependence of the maximum

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overheating temperature in the center of the small plate on the temperature of the surrounding air has maxima in the case of a change of this temperature of from 20 - 100° C.  
Section of Ceramics: V.M. Belousov (TPI) gave a calculation of the ceramic structure. Docent V.A. Presnov and others (SFTI) reported on investigations of the vacuum-tight ceramic structure and the nature of the ceramic-metal boundary.

Section of Crystallization: Professor A.M. Kuz'min and assistants (TPI) dealt with geological problems. S.A. Stroitelev (TPI) gave a method for the selection of effective admixtures. A.P. Izergin developed a method and an equipment for the purification of liquids from small admixture quantities.

In the joint session of the sections concerned with the breakdown of solid dielectrics, ceramics, polarization, losses, and conductivity Professor N.I. Shishkin spoke about the "Electric Conductivity of Solidified Glasses". The final general meeting was opened by Ye.G. Papush (Dnepropetrovsk Institute of Railway Traffic Engineers) who reported on the "Foundations of the Theory of Polarons". I. Ye. Balygin and A.P. Rumyantsev reported on the investigation of the dissipation processes of the silver isotope

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Conference on Solid Dielectrics and Semiconductors SOV/105-58-7-25/32

Ag<sup>110</sup> in amorphous and crystalline quartz, and in agglomerated oxides as Al<sub>2</sub>O<sub>3</sub>, ZrO<sub>2</sub> and TiO<sub>2</sub>.

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnical Institute)

1. Dielectrics--USSR 2. Semiconductors--USSR 3. Conferences

Card 4/4

IVANKINA, M.S.

Crystalline lattice structure of alkali metal halides in solid solutions. Izv. vys. ucheb.zav.; Fiz. no.1:101-105 '58. (MIRA 11:6)

1. Tomskiy politekhnicheskii institut imeni S.M. Kirova.  
(Alkali halide crystals) (Solutions, Solid)

IVANKINA, M.S.

Effect of the composition on heat of formation of alkali halide  
solid solutions. Izv. vys. ucheb. zav.; fiz. no.3:165-167 '58.  
(MIRA 11:9)

1. Tomskiy politekhnicheskii institut imeni S.M. Kirova.  
(Alkali halide crystals) (Solutions, Solid) (Heat of formation)



SOV/139-58-6-8/29

AUTHOR: Ivankina, M.S.

TITLE: Dependence of the Linear Expansion Coefficient of Solid Solutions of Alkali and Halide Salts on their Composition (Zavisimost' koeffitsiyenta lineynogo rasshireniya tverdykh rastvorov shchelochno-galoidnykh soley ot ikh sostava)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1958, Nr 6, pp 57-59 (USSR)

ABSTRACT: The paper was presented at the Conference of Higher Educational Establishments on Dielectrics and Semi-conductors, held in Tomsk in February 1958. Dependence of the linear expansion coefficient of the solid solutions KCl-RbCl, KCl-KBr and NaCl-NaBr on their composition was measured in the temperature region 25-100°C. The samples were in the form of 5 x 5 x 25 mm rods prepared from monocrystals freshly grown by the Kyropoulos method (Ref 2). The thermal expansion was measured by means of a liquid dilatometer designed and constructed by P.P. Odintsov. This dilatometer is shown in Fig 1. The sample (1) was placed in a quartz tube (3)

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SOV/139-58-6-8/29

Dependence of the Linear Expansion Coefficient of Solid Solutions of Alkali and Halide Salts on their Composition

and a quartz rod (2) was pressed against the sample. The free end of the quartz rod rested on a membrane (8) of a brass chamber (6) filled with a liquid (5). The expansion of the sample was given by the rise of the liquid level in a calibrated capillary (7) connected to the brass chamber (6). This instrument made it possible to measure changes in the length of the sample to within  $\pm 0.0001$  mm; this corresponds to  $\pm 10^{-6}$  deg $^{-1}$  precision in determination of the linear expansion coefficient for a sample of 25 mm length. The results are plotted as dependences of the linear expansion coefficient  $\delta$  on the composition of the solid solutions in Fig 2-4. The author draws the following conclusions from Fig 2-4: 1) increase of the linear expansion coefficient of the solid solutions KCl-RbCl, KCl-KBr and NaCl-NaBr compared with the coefficients of the components confirms that when these solid solutions are formed the interaction between the lattice ions is weakened; 2) the departure of the linear expansion coefficient of a solid solution from additivity of the

Card 2/3

SOV/139-58-6-3/29

Dependence of the Linear Expansion Coefficient of Solid Solutions of Alkali and Halide Salts on their Composition

linear expansion coefficients of its components increases with the number of defects of the crystal lattice. Acknowledgements are made to A.A.Vorob'yev and Ye.K.Zavadovskaya for advice and V.L.Borisov for assembly of the apparatus. There are 4 figures and 10 Soviet references.

ASSOCIATION: Tomskiy Politeknicheskoy Institut imeni S.M.Kirova (Tomsk Polytechnical Institute imeni S.M.Kirov)

SUBMITTED: 9th May 1958

Card 3/3

SAVINTSEV, P.A.; IVANKINA, M.S.

Heat for formation and molecular concentration of ionic compounds  
and their solid solutions. Izv. TPI 95:176-182 '58. (MIRA 14:9)

1. Predstavleno professorom doktorom A.A.Vorob'yevym.  
(Ionic crystals) (Solutions, Solid)

SAVINTSEV, P.A.; IVANKINA, M.S.

Regularity of certain physical properties of chemical compounds.  
Izv. TPI 95:183-191 '58. (MIRA 14:9)  
(Crystal lattices) (Periodic law)

IVANKINA, M.S.

Differential calorimetric method of measuring the heat of formation  
of solid solutions. Izv. TPI 95:192-197 '58. (MIRA 14:9)

1. Predstavleno professorom doktorom A.A.Vorob'yevym.  
(Solutions, Solid) (Calorimetry) (Heat of formation)

ZAVADOVSKAYA, Ye.K.; IVANKINA, M.S.

Effect of the length of storage of solid solutions of  
alkali halide salts on their physical properties. Izv.  
vys.ucheb.zav.; fiz. no.5:172-175 '59. (MIRA 13:4)

1. Tomskiy politekhnicheskii institut imeni S.M.Kirova.  
(Solutions, solid) (Alkali halides)

IVANKINA, M.S.

Effect of the composition of solid solutions of alkali halides on  
the coefficient of linear expansion. Izv.vys.ucheb.zav.; fiz. no.6:  
57-59 '59. (MIRA 12:4)

1. Tomskiy politekhnicheskii institut im. S.M. Kirova.  
(Alkali halides)



VOROB'YEV, A.A.; ZAVADOVSKAYA, Ye.K.; IVANKINA, M.S.; SAVINTSHV, P.A.

Physical properties of solid solutions of alkali halide compounds, and the molecular concentration. *Izv.vys.ucheb.zav.;*  
fiz. no.6:162-165 '59. (MIRA 13:6)

1. Tomskiy politekhnicheskii institut imeni S.M.Kirova.  
(Alkali metal halides) (Solutions, Solid)

*IVANKINA, M. S.*

66170

SOV/143-59-9-7/22

~~5(0), 24(3)~~ 24.7500  
AUTHORS:

Vorob'yev, A.A., Doctor of Physical and Mathematical Sciences, Professor,  
Ivankina, M.S., Kiblina, A.N., Candidate of Technical Sciences, and  
Savintsev, P.A., Candidate of Physical and Mathematical Sciences,  
Docent

TITLE: The Physical and Chemical Properties of Insulating Crystals

PERIODICAL: Izvestiya vysshikh ucebnykh zavedeniy, Energetika, 1959, <sup>2</sup>Nr 9,  
pp 43-47 (USSR)

ABSTRACT: During the years of Soviet rule, the scientists of Tomsk perform-  
ed considerable research in studying the structures mechanical,  
thermal and electrical properties of ion crystals and alloys. The  
energy of the crystal lattice was selected as the magnitude which  
determines the structure and the interaction of particles in a  
crystal lattice, A.A. Vorob'yev (Ref.1). The values of the crystal  
lattice energy are unknown for crystals with admixtures. P.A. Sa-  
vintsev (Ref.2) showed that the comparison of properties of crys-  
tals and alloys with identical type of the crystal lattice and  
identical chemical bonds between the particles may be performed. ✓

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SOV/143-59-9-7/22

## The Physical and Chemical Properties of Insulating Crystals

by the molecular concentration  $\alpha$ :  $\alpha = \frac{D}{M} \cdot 10^3$  where D = crystal density; M = molecular weight. According to the Born formula,  $\alpha$  is connected with the crystal lattice energy  $U = C \sqrt{\frac{D}{M}}$  where C

is a constant. According to Born's formula, the energy of alkali halides is proportional to the ratio D:M. The authors compare the properties of crystals and alloys with the lattice energy and the molecule concentration. The Tomsk scientists devoted great attention to studies of the mechanical properties of ion crystals. V.D. Kuznetsov (Ref.3) analyzed methods of determining the hardness of brittle bodies and developed a number of new methods: drilling, damped oscillations, mutual grinding. V.N. Kashcheyev (Ref.4) and L.A. Kudryavtseva (Refs.5,6) showed that the hardness in the method of mutual grinding does not depend on the type of the abrasive powder used for grinding, only when the mechanical strength of the powder is several times greater than the strength of crystals to be ground. In this case the hardness ratio coincides with the ratios of surface energies calculated by Born and Shtern. X

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SOV/143-59-9-7/22

## The Physical and Chemical Properties of Insulating Crystals

P.A. Savintsev, V.Ya. Zlenko and A.F. Naumov (Ref.7) determined the hardness in drilling of alkali halide monocrystals with admixtures. They found that admixtures of alkali halide salts reduce the hardness of crystals. P.A. Savintsev and V.V. Kutsepalenko (Refs.8,10) stated that the greatest hardness value is found in the area of equal component concentrations, which corresponds to the smallest value of  $\alpha$ . M.S. Ivankina (Refs.12,13,14) investigated the structure of the crystal lattice of solid solutions of alkali halide salts and a number of their thermal properties depending upon the composition in connection with the energy of interaction of components. A.A. Vorob'yev, Ye.K. Zavadovskaya and A.M. Trubitsin (Ref.16) and K.A. Vodop'yanov and G.I. Galibina (Ref.23) determined the electrical properties of ion alloys of different stability degrees at room temperature. A.N. Kislina (Refs.19,20,21) investigated the electric strength of KJ-KBr, KJ-NaJ and other properties of alkali halides. The authors present the following conclusions: The physical and chemical properties of ion crystals and their solid solutions are determined by the crys-

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tal lattice energies. The formation of alkali halide solid solutions KCl-NaCl, NaCl-NaBr, NaCl-NaJ, are accompanied by a destruction of the crystal lattice, absorption of heat, increased linear expansion coefficient, increased electric conductivity, a reduction of the density and molecule concentration, and a hardness reduction in mutual grinding and drilling. The aging of solid solutions will result. There are 2 sets of graphs and 24 Soviet references.

ASSOCIATION: Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S.M. Kirova (Tomsk - Order of the Red Labor Banner - Polytechnic Institute imeni S.M. Kirov) ✓

SUBMITTED: April 21, 1959

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IVANKINA, M. S., Cand Phys-Math Sci -- (diss) "Physicochemical properties and heats of formation of solid solutions of alkali halide compounds." Tomsk, 1960. 13 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Tomsk State Univ im V. V. Kuybyshev); 150 copies; price not given; list of authors' works on pp 11-13 (15 entries); (KL, 17-60, 138)

ZAVADOVSKAYA, Ye.K.; IVANKINA, M.S.; MELIK-GAYKAZYAN, I.Ya.

Pore formation during annealing of mixed KCl-KBr crystals. Kristallografiia 5 no.2:324-325 Mr-Apr '60. (MIRA 13:9)

1. Tomskiy politekhnicheskii institut.  
(Potassium chloride) (Potassium bromide)

*IVANKINA, M.S.*81959  
S/181/60/002/04/19/034  
B002/B06324.7600  
AUTHORS:Zavadovskaya, Ye. K., Ivankina, M. S., Melik-Gaykazyan,  
I. Ya.

TITLE:

The Problem of the Influence of Annealing on the Physical  
Properties of Solid Solutions of Alkali Haloid Salts

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 4, pp. 665-669

TEXT: Mixed crystals composed of 51% KCl and 49% KBr, as well as 49.3% NaCl and 50.7% NaBr were bred by Kyropoulos' method. The crystals were kept at 600°C for 5, 10, 20, 25, 50, and 75 hours; the temperature was kept constant with an accuracy of  $\pm 2^\circ\text{C}$  with the aid of the recording device ЭПН-09 (EPP-09). The following was then measured on the crystals: density, lattice constant, molecular concentration, linear expansion coefficient, and heat conductivity (Tables 1 and 2). The cleavage faces of the crystals were examined with the aid of a polarization microscope and the camera "Зенит" ("Zenit"). (Figs. 1, 2, and 3). On heating, the vacancies are concentrated and form negative crystals inside. The faces {100} and {110} are particularly developed. Cleavage cracks are the cause of the

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LVH 2/11/51, m.s.

vesopromy konferentsiya po fizike dielektrikov. 24, 1952

Prilozheniya k tezise konferentsii vesopromy konferentsii (fizika dielektrikov), Moscow, Izdatel'stvo AN SSSR, 1950. 312 p. Zvezda slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Fizicheskii Institut Imeni P.N. Lebedeva.

No. of Publishing House: Izd. Sverdlovskaya, Tom. 24, 1. 8. Dopolneniye: Fizicheskii Institut Imeni P.N. Lebedeva, Moscow, 1952.

Author: G.I. Skvortsov, Doctor of Physics and Mathematics (Moscow), and K.V. Filipova, Candidate of Physics and Mathematics.

Subject: This collection of reports is intended for scientific investigation in the physics of dielectrics.

CONTENTS: The Special All-Union Conference on the Physics of Dielectrics held in Moscow at the Fizicheskii Institut Imeni P.N. Lebedeva (Moscow) from 1951 to 1952. The scientific centers of the USSR and of several other countries of the international scientific community participated in the conference. The reports presented at the conference and summaries of the discussions which followed. The reports in this collection deal with dielectric properties, losses, and polarization, and with specific inductive properties of various crystals, chemical compounds, and specific inductive properties of ferroelectric crystals, and various radiation and irradiation effects on dielectrics are investigated. The volume contains a list of other reports presented at the conference dealing with polarization, losses, and non-linear dielectric properties, which were published in the journal Izvestiya AN SSSR Seriya Fizicheskaya, No. 11, 1952. 50 personal files are mentioned.

Torbis, M.N. Current Day Picture of Solid Dielectrics [Tran. Politehnicheskii Institut Imeni S.M. Kirov] 415

Iskender, M.G. Certain Properties in the Physical Properties of Solid Dielectrics [Tran. Politehnicheskii Institut Imeni S.M. Kirov] 423

Discussion 429

Obzornye, I.M. Properties of the Al-Al<sub>2</sub>O<sub>3</sub> System - Electrolyte Doped Al-Keramic Polymers [Generalizatsiya elektrofizicheskoi i khimicheskoi teorii i praktiki (Moscow)] 432

Yuzhakov, S.M. Resistive Conductivity of Complex Glasses [Doklady Akad. Nauk SSSR] 439

Konyshev, A.S. Thermofusion Current in Certain Materials Having Ion-Conductance With a Closed External Circuit [Doklady Akad. Nauk SSSR Seriya Fizicheskaya, No. 11, 1952] 459

Terent'ev, I.K. Investigation by Means of Radioactive Isotopes of the Structure of Certain Glass in Glasses (Conductivity optically anisotropic glasses, Izdatel'stvo Gosopticheskogo Nauchnogo Issledovaniya S.S.S.R., Moscow, 1952)

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Poluyev, I.M., B.M. Golovin, I.S. Zolotarev, A.G. Kabanov, and T.N. Pridina. Investigation of Photochemical Processes Formed Under the Action of Light and X-Ray Radiation in Glasses (Glasses and Polymers) [Doklady Akad. Nauk SSSR Seriya Fizicheskaya, No. 11, 1952] 481

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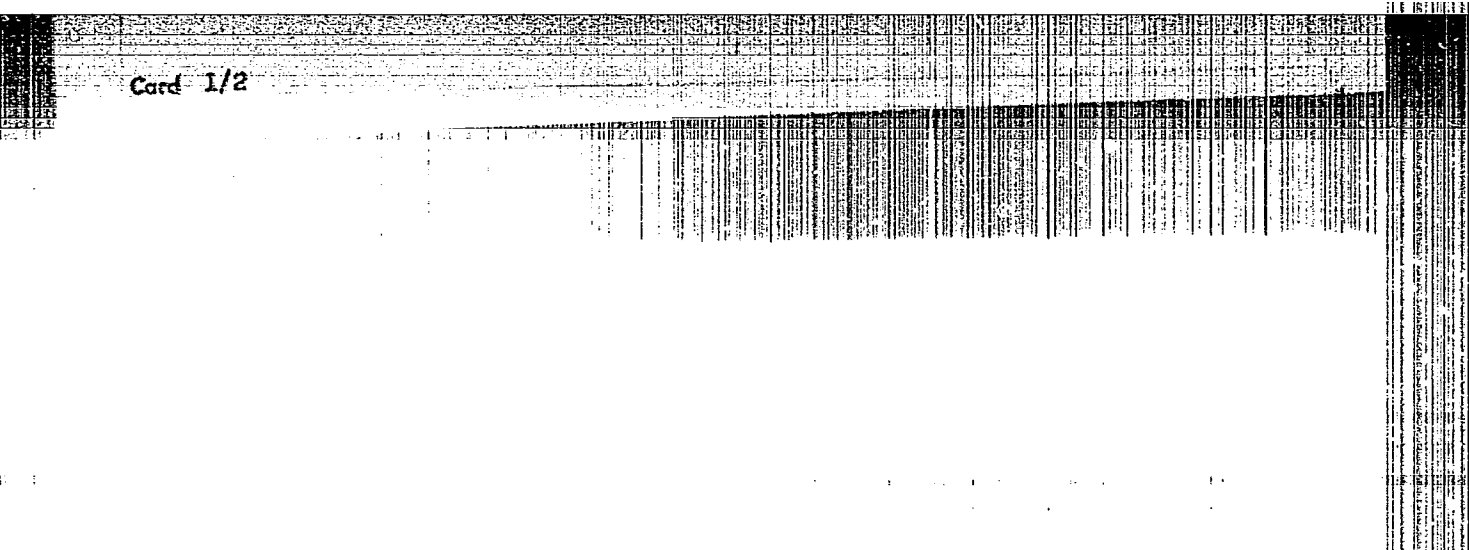
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Shustova, A.M. Electric Strength of Synthetic Polymers (Doklady Akad. Nauk SSSR Seriya Fizicheskaya, No. 11, 1952) 518

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1. Tomskiy politekhnicheskiy institut imeni Kirova.

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prom. 10 no.11:18-20 N '61. (MIRA 14:10)

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