

L 53997-65

ACCESSION NR: AP5017373

group into the ring not only does not increase the activity of the compound, it may even decrease it; (5) growth stimulation also depends on the spatial structure of the molecule. Orig. art. has 6 tables. 0

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR); Institut kartofel'nogo khozyaystva, Akademii nauk TurkmSSR (Institute of Potatoe Growing, Academy of Sciences TurkmSSR); Institut botaniki, Akademii nauk TurkmSSR (Institute of Botany, Academy of Sciences TurkmSSR); Institut ovoshchnogo khozyaystva, Akademii nauk TurkmSSR (Institute of Vegetable Growing, Academy of Sciences, TurkmSSR).

SUBMITTED: 02Jun64

ENCL: 00

SUB CODE: LS, OC

NR REF SOV: 004

OTHER: 001

JPRS

Q/c
Cdrd 2/2

С.И.ИВАНОВ, В.В.ИВАНОВ, В.В.; МИРОНОВА, Г.И.

Comparative genetic study of the characteristics of the higher nervous activity in chickens in crossbreeding. Report No.23
Study of the characteristics of nervous processes in reciprocal crossbreeding of the species Australorps and Plymouth Rocks.
Nauch.sob. Inst.fiziol. AN SSSR no.3:8-11 '65.

(MIRA 18:5)

3. Группа физиологических низших животных. (Зав. - Н.Г.Иопатина)
Институт физиологии имени Павлова АН ССРС.

SMIRNOVA, G.S.

✓ Comparative investigation of the rate of hydrolysis of cellulose, monocarboxycellulose, alginic, and pectinic acids. A. A. Konkin, G. S. Smirnova, and Z. A. Rogovin. *Vych. izdat. Khim. i tekstil. Inst.* 13, 99-106 (1954); *Referat. Zhur., Khim.* 1955, No. 4923. — Replacing the alc. group at C-atom 6 by a CO₂ group did not materially affect the resistance of the glucosidic bond to acid. The various distributions of OH groups in the primary links of macromols. of polyuronic acids had no noticeable effect on the resistance of the glucosidic bond to acid. M. Hosh

math

PM

8000

DEREVITSKAYA, V.A.; SMIRNOVA, G.S.; ROGOVIN, Z.A.

Comparative acidity of hydroxyl groups in D-glucose, α - and β -methylglucosides, maltose, and cellobiose. Dokl. AN SSSR 141 no.5:1090-1092 D '61. (MIRA 14:12)

1. Moskovskiy tekstil'nyy institut. Predstavleno akademikom M.M. Shemyakinym.

(Glycosides)

(Hydroxyl group)

SMIRNOVA, G.V.; VLASENKO, M.M.; SURIKOV, M.P. (Makhachkala)

Effect of insulin on protein metabolism in aged persons. Vrach.delo
no.6:649 Je '59. (MIRA 12:12)

1. Kafedra biokhimii (zav. - dotsent M.P. Surikov) Dagestanskogo
meditsinskogo instituta i Norskiy dom invalidov Yaroslavskoy oblasti
(zav. meditsinskoy chast'yu - vrach M.M. Vlasenko).
(INSULIN) (PROTEIN METABOLISM)

SURIKOV, M.P.; SHIRNOVA, G.V.; LEBEDEV, Yu.A.; MOROZKINA, T.S.

Influence of sulfhydryl compounds on some biochemical indexes in
experimental atherosclerosis. Farm. i toks. 24 no.5:586-591 S-0
'61. (MIRA 14:10)

1. Kafedra biokhimii (zav. - doktor meditsinskih nauk M.P.Surikov)
Vitebskogo meditsinskogo instituta.
(MERCAPTO COMPOUNDS) (ARTERIOSCLEROSIS)

GRENBERG, T.F.; SMIRNOVA, G.V.; TOKIN, B.P.

Experiments in the induction of blastomatous growth in rat embryos
Vest.LGU 15 no.21:95-100 '60. (MIRA 14:4)
(Carcinogens) (Embryology)

SUKHOTIN, A.M. (Leningrad); SABUROVA, D.N. (Leningrad); SMIRNOVA, G.V.
(Leningrad)

Association of ions in solutions. Part 5: Migration ratio of LiCl
and LiI in mixed solvents. Zhur. fiz. khim. 35 no. 4:711-712 Ap
'61. (MIRA 14:5)

1. Leningradskiy institut prikladnoy khimii.
(Ions--Migration and velocity)

KASAVINA, B.S.; ZENKEVICH, G.D.; RIKHTER, A.I.; LAUFER, A.L.; LIRTSMAN, V.M.;
MARKOVA, O.N.; Primali uchastiye: ARENBERG, A.A.; AGAPOVA, N.A.;
SMIRNOVA, G.V.

Some enzyme-substrate systems in the process of regeneration of the
bony tissue. Eksper. khir. i anest. 7 no.4:56-63 J1-Ag '62.
(MIRA 17:5)

1. Iz biokhimiyeskoy laboratorii (zav. - doktor biolog. nauk
B.S.Kasavina) Tsentral'nogo instituta travmatologii i ortopedii
(dir. - doktor med. nauk M.V.Volkov) Ministerstva zdravookhraneniya
SSSR i kafedry gistologii (zav. - prof. L.I.Falin) Moskovskogo
meditsinskogo stomatologicheskogo instituta.

SMIRNOVA, G.V.: PREOBRAZHENSKIY, N.A., MARIT, M. YE.,

Alkaloids

New Method for obtaining pilocarpic alkaloids. Do l. AN SSSR 81 No. 4, 1951.

SO: Monthly List of Russian Accessions, Library of Congress, May 195~~1~~², Uncl.

PREOBRAZHENSKIY, N.A.; MAURIT, M.Ye.; BAZILEVSKAYA, G.I.;
SMIRNOYA, G.V.; EL'MANOVICH, M.M.; VALAKHANOVICH, A.I.;
PERSIYANOVA, E.

Synthesis of racemic stereoisomeric α -alkylparaconic acids.
Zhur.ob.khim. 30 no.7:2250-2256 J1 '60. (MIRA 13:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Paraconic acid)

MAURIT, M.Ye.; SHTERNBERG, R.P.; PAKHOMOV, A.M.; BAZILEVSKAYA, G.I.;
SMIRNOVA, G.V.; PREOBRAZHENSKIY, N.A.

Synthesis of optically active α -alkyl- γ -butyrolactone-
 β -carboxylic (α -alkylparaconic) acids. Zhur.ob.khim. 30
no.7:2256-2259 J1 '60. (MIRA 13:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Paraconic acid)

MAURIT, M.Ye.; SMIRNOVA, G.V.; PARFENOV, E.A.; SARYCHEVA, I.K.; PREOBRAZHEN-
SKIY, N.A.

Complete synthesis of 2,5,7,8-tetramethyl-2-(4,8,12-trimethyl-
tridecyl)-6-oxochromane (vitamin E, α -tocopherol) and its deriv-
atives. Dokl. AN SSSR 140 no.6:1330-1333 0 '61. (MIRA 14:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V.
Lomonosova. Predstavleno akademikom A.N.Nesmeyanovym.
(Tocopherol)

MAURIT, M.Ye.; SMIRNOVA, G.V.; PARFENOV, E.A.; VINKOVSKAYA, T.M.;
PREOBRAZHENSKIY, N.A.

Total synthesis of 3,7,11,15-tetramethyl-1-hexadecen-3-ol
(isophytol). Zhur.ob.khim. 32 no.8:2483-2487 Ag '62. (MIRA 15:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V. Lomonosova.
(Hexadecenol)

ALEKSEYEVA, O.M. [Aleksieieva, O.M.]; SMIRNOVA, G.V. [Smyrnova, H.V.]

Tenth All-Union Conference on Meteorites. Geol.zhur, 22
no.6:93 '62. (MIRA 16:2)

(Meteorites)

ACCESSION NR: AR4008225

S/0169/63/000/011/B041/B041

SOURCE: RZh. Geofizika, Abs. 11B263

AUTHOR: Kosmachev, K. P.; Volozhina, V. V.; Smirnova, G. V.

TITLE: The problem of estimating freezes (using East Siberia as an example)

CITED SOURCE: Tr. Zabaykal'sk. kompleksn. n.-i. in-ta. Sib. otd. AN SSSR. Ser. Ekon. i geogr., vy*p. 1, 1963, 103-113

TOPIC TAGS: microclimatology, East Siberian freezing period, freezing period estimation, East Siberia microclimatology

TRANSLATION: The microclimatic conditions in the regions of Eastern Siberia give rise to considerable differences in the duration of the frostless period over very limited areas. The duration of the frostless period may be 40-45 days longer or shorter in a given area than in an adjacent area. The authors point out the need for a more detailed spatial consideration of the arrival of autumn frosts; this will increase the effectiveness of agriculture in Eastern Siberia. In this

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ACCESSION NR: AR4008225

connection the authors discuss the problems of insurance payments on frost-damaged crops. Bibliography with 18 titles. N. Davy*dov.

DATE ACQ: 09Dec63

SUB CODE: AS

ENCL: 00

Card 2/2

ULITINA, Z.I.; SMIRNOVA, G.V.; BOGOSLOVSKAYA, L.M., inzh.-khimik

New formula for thickeners made with alga flour for printing
with glacial, mordant and vat dyes. Tekst. prom. 25 no.9:64
S '65. (MIRA 18:10)

1. Nachal'nik nauchno-issledovatel'skoy laboratorii Shuyskoy
ob'yedinennoy fabрики (for Ulitina). 2. Starshiy inzh. nauchno-
issledovatel'skoy laboratorii Shuyskoy ob'yedinennoy fabрики
(for Smirnova). 3. Shuyskaya ob'yedinennaya fabrika (for
Bogoslovskaya).

SOKOLOVA, T.A.; SMIRNOVA, G.Ya.

Development of the Podzol formation on granite. Pochvovedenie
no.6:41-49 Je '65. (MIRA 18:11)

1. Pochvennyy institut imeni Dokuchayeva. Submitted Dec. 27,
1963.

Smirnova, G. Ye.

51-6-12/25

AUTHORS: Trapeznikova, O. N., and Smirnova, G. Ye.

TITLE: Scattering of Light in Crystalline Polymers.
1. Formation and Melting of the Crystalline Phase
in Chloroprene Rubber. (Rassevaniye sveta v
kristallicheskikh polimerakh. 1. Obrazovaniye
i plavleniye kristallicheskoy fazy v khloroprenovom
kauchuke.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol. III, Nr. 6,
pp. 631-637. (USSR)

ABSTRACT: The purpose of this work was to study the process
of the formation and melting of the crystalline phase
of chloroprene rubber polymer. Light scattered by
large particles in the polymer is mostly refracted and,
due to anisotropy of these particles, should be con-
siderably depolarized. Therefore measurements were
made in polarized light and indicatrices (character-
istics) for polarized and depolarized components of
the scattered light were obtained. It was possible
to separate out the direct polarized beam and to

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51-6-12/25

Scattering of Light in Crystalline Polymers. 1.

about 2 mm^3 . Fig.1 shows the change with time of the scattering indicatrix obtained in crossed nicols, while Fig.2 shows a similar change in parallel nicols. The indicatrices in Fig.1 were obtained after 1-20 days of crystallization, and those in Fig.2 after 1-7 days of crystallization. Measurements of the scattering indicatrices during melting of the crystalline phase show that the indicatrices do not change in their form (Fig.3). Fig.4 shows the temperature dependence of the intensity of light scattered in a forward direction (in crossed nicols) for a polychloroprene film crystallized at room temperature. Fig.5 shows a similar curve for polychloroprene crystallized at 0°C . Fig.6 shows a temperature hysteresis in the scattered light intensity. From the results obtained the authors conclude that slow crystallization of polychloroprene is not due to a slow growth of crystallites but due to a low probability of formation of crystallization nuclei. At the beginning of crystallization a small number of large crystals appears,

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51-6-12/25

Scattering of Light in Crystalline Polymers. 1.

instead of the expected large number of small nuclei. Assuming the particles to be isotropic, and using a formula for spherical particles whose dielectric properties do not differ much from those of the surrounding medium (Ref.4) the authors obtained some estimates of the dimensions of crystallites. At the beginning of crystallization the crystallite radius is about 5μ . In the middle and at the end of crystallization dimensions of crystallites found from scattering at low angles are about 5μ , while the radius calculated from high-angle scattering is about 1.5μ . The dimensions of particles calculated from the integro-differential equation of Shifrin (Refs. 4, 5) are found to agree well with experiment. Since the form of the scattering indicatrices does not change on melting of crystallites, it follows that the amount of the crystalline phase does not change but only the nature of the crystalline lattice is affected in all crystallites at the same time. The hysteresis effect and the occurrence of steps in the curves obtained

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51-6-12/25

Scattering of Light in Crystalline Polymers. 1.

on melting also indicate that changes occur inside the crystallites themselves instead of melting and recrystallization of whole crystallites. The interpretation of the crystallization and melting processes proposed in the present paper agrees fully with the results obtained on other polymers by means of polarization microscopy. The authors thank E. I. Sharakh ova who helped with the measurements, and K. S. Shifrin for valuable advice. There are 6 figures, 1 table and 6 references, of which 2 are Russian and 4 English.

ASSOCIATION: Leningrad State University imeni A. A. Zhdanov
(Leningradskiy gosudarstvennyy universitet im.
A. A. Zhdanova.)

SUBMITTED: February 14, 1957.

AVAILABLE: Library of Congress.
Card 5/5

SMIRNOVA, I. (Pukhovitskiy rayon, Minskaya obl.)

Resistance of "stubborn" peas has been broken. Rab. i sial.
38 no.12:5-6 D '62. (MIRA 16:1)
(Pukhovichi District--Peas)

L 9206-66 EWT(1)/EEC(k)-2 IJP(c)

ACC NR: AR6000101

SOURCE CODE: UR/0058/65/000/008/A015/A016

SOURCE: Ref. zh. Fizika, Abs. 8A145

AUTHORS: Belugin, A. F.; Leonova, L. M.; Osipova, V. N.; Smirnova, I. A.

ORG: none

TITLE: The SPV-1 spectrovisor

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 2, vyp. 1, 1964, 635-642

TOPIC TAGS: spectrophotometry, spectrum analysis, continuous spectrum recording.

TRANSLATION: An automatic high-speed spectrophotometer-spectrovisor SPV-1 was developed, intended for the investigation of the intermediate products of substances that change during the course of time. The working range of the instrument is 220--1000 nm. The recorder employed was a cathode-ray tube. The recording rate can be set equal to 15 or 7.5 nm/sec, depending on the complexity of the investigated spectrum. Provision is made in the spectrovisor for connecting an EPP-09 automatic recorder, in which case the spectrum-registration speed is 4 nm/sec.

SUB CODE: 20/ SUBM DATE: none/ ORIC REF: 000/ OTH REF: 000

Card 1/1 rds

2

SMIRNOVA, I.A.

Rickettsia and Proteus micro agglutination reactions in noninfectious patients with and without history of typhus. Trudy LSGMI 46:193-202 '59. (MIRA 13:11)

1. Kafedra mikrobiologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. M.N.Fisher).
(TYPHUS FEVER) (RICKETTSIA) (PROTEUS)

SMIRNOVA, I.A.

Semifluid medium with Congo red for bacteriologic control of the quality of disinfection. Lab.delo 7 no.9:49-51 S '61. (MIRA 14:10)

1. Leningradskaya gorodskaya dezinfektsionnaya stantsiya (glavnyy vrach V.V.Yefremova).

(BACTERIOLOGY—CULTURES AND CULTURE MEDIA)
(CONGO RED) (DISINFECTION AND DISINFECTANTS)

GEYKO, N.F., inzh., red.; D'YACHKOV, G.D., inzh.; SMIRNOVA, I.A.,
inzh., red.; STRASHNYKH, V.P., red. izd-va; KOMAROVSKAYA,
L.A., tekhn. red.

[Construction specifications and regulations] Stroitel'-
nye normy i pravila. Moskva, Gosstroizdat. Pt.1. Sec.D.
ch.1 [Railroads, materials and products] Zheleznye dorogi; ma-
terialy i izdeliya (SNIP I-D.1-62). 1963. 16 p. (MIRA 16:10)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po
delam stroitel'stva. 2. Gosstroy SSSR (for Geyko).
3. Mezhdovedomstvennaya komissiya po peresmotru stroitel'-
nykh norm i pravil Akademii stroitel'stva i arkhitektury
SSSR (for D'yachkov).
4. Vsesoyuznyy nauchno-issledovatel'skiy
institut transportnogo stroitel'stva Ministerstva trans-
portnogo stroitel'stva (for Smirnova).
(Building materials) (Railroads)

ZHUKHOVITSKIY, A.A.; SHUTKINA, N.S.; TURKIL'TAUB, N.M.; SHVARTSMAN, V.P.;
SHELYAKHOV, A.F.; SMIRNOVA, I.A.

Chromatography without gas carrier and the phenomenon of adsorp-
tion substitution. Zav. lab. 30 no.11:1308-1313 '64
(NIRA 18:1)

POLYAK, M.K.; SMIRNOVA, I.A.; FRANTOV, G.S.

Aeroelectric prospecting using the infinitely long cable method
in the Kola Peninsula. Sov.geol. 8 no.2:91-99 F 165.
(MIRA 18:12)

1. Soyuznyy zapadnyy geofizicheskiy treat.

BOBROVITSKIY, G.M. (Bobrovits'ka, G.M.); YOKA, I.M.; SHIROVA, I.A.;
CHRISTYANOVA, A.V.

Biological activity of DNA preparations isolated from silkworm
tissues infected with nuclear polyhedrosis virus. Mikrobiol.
zhur. 27 no.6:73-77 '65. (MIRA 19:1)

I. Institut mikrobiologii i virusologii AN URSR. Submitted
April 21, 1965.

A. S. S.

Rapidity of hardening of glass and its mechanical strength. I. A. SAMKOVA. *Trudy Mashov. Khim.-Tekh. Inst. MVD*, 1948, No. 6, pp. 93-102; *Khim. Revrat. Zhur.*, 4 [9] 100 (1941).—The purpose of the investigation was to produce a glass with high mechanical and thermal strengths by creating artificial strains. S. fused two or more layers of glasses having the same coefficient of expansion but various rates of solidification. The resistance to shock of these glasses was appreciably higher than that of the usually heated and annealed glass.
M. Ho.

MINOVA, I. A.

Primenenie plastifitsirui tshchikh k betonu [Application of plasticizers
to concrete]. Moskva, Transzheldorizdat, 1952. 52 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 11 February 1954

KITAYGORODSKIY, I.I.; KESHISHYAN, T.N.; SMIRNOVA, I.A., nauchnyy redaktor;
GLEZAROVA, I.L., redaktor; DVORNIKOVA, N.F., tekhnicheskiy redaktor

[Foam glass] Penosteklo. Moskva, Gos. izd-vo lit-ry po stroit.
materialam, 1953. 77 p. [Microfilm] (MIRA 7:10)
(Glass)

SMIRNOVA, I.A., inzhener.

Effect of concentrates of waste sulfite liquor on some properties of
cement. Trudy ~~TSNIS~~ ~~MPS~~ no.9:5-29 '53. (MIRA 8:1)
(Cement) (Sulfite liquor)

SMIRNOVA, I.A., inzhener, redaktor; KARAMYSHEV, I.A., inzhener, redaktor;
KHITROV, P.A., tekhnicheskii redaktor.

Problems in the technology of building materials. Trudy TSNIS MPS
no.9:5-198 '53. (MIRA 9:1)
(Building materials)

SKRAMTAYEV, B.G.; SMIRNOVA, I.A., inzhener.

Producing reinforced concrete railroad ties in England. Transp. stroi.
6 no. 10:27-29 0 '56. (MIRA 10:1)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR
(for Skramtayev).
(Great Britain--Railroads--Ties, Concrete)

SOV/124-58-5-6196

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 161 (USSR)

AUTHORS: Bogautdinova, G.G., Ratinov, V.B., Rozenberg, T.I.,
Smirnova, I.A., Stalikova, G.D.

TITLE: Effect of Some Organic and Nonorganic Additives on the
Plastic Properties of Gypsum (Vliyaniye nekotorykh organi-
cheskikh i neorganicheskikh dobavok na plasticheskiye svoystva
gipsa)

PERIODICAL: Sb. tr. Vses. n.-i. in-ta zhelezobeton. izdeliy i nerudn.
materialov, 1957, Nr 1, pp 71-78

ABSTRACT: Bibliographic entry

1. Gypsum--Plasticity 2. Organic materials--Performance 3. Inorganic
materials--Performance

Card 1/1

SOV/124-58-5-6195

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 161 (USSR)

AUTHORS: Smirnova, I.A., Ratinov, V.B.

TITLE: Investigation of Creep of Gypsum and Gypsum Cement (Issledovaniye polzuchesti gipsa i gipsotsementa)

PERIODICAL: Sb. tr. Vses. n.-i. in-ta zhelezobeton. izdeliy i nerudn. materialov, 1957, Nr 1, pp 108-116

ABSTRACT: Bibliographic entry

1. Gypsum--Creep 2 Cement--Creep

Card 1/1

SMIRNOVA, I.; DOVZHIK, O.; RATINOV, O.

Investigating some basic properties of gypsum cement binders.
Stroi. mat. 4 no.4:31-32 Ap '58. (MIRA 11:5)
(Gypsum) (Binding materials--Testing)

RATINOV, V.B.; SMIRNOVA, I.A.

Effect of layers on the creep and strength of gypsum. Sbor.
trud. NIIZHelezobetona no.2:145-155 '59. (MIRA 15:1)
(Gypsum)

SHESTOPEROV, Sergey Vladimirovich; SMIRNOVA, I.A., red.; CHVANOV, V.G.,
red.izd-va; MAL'KOVA, N.V., tekhn.red.

[Durability of concrete] Dolgovechnost' betona. Izd.2., perer.
i dop. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transporta
i shosseinykh dorog RSFSR, 1960. 512 p. (MIRA 13:9)
(Reinforced concrete)

SMIRNOVA, I.A.

S/031/61/030/023/030/061
B136/B101

AUTHORS: Ratinov, V. B., Rozenberg, T. I., Dovzhik, O. I. Kucherya-
yeva, G. D., Smirnova, I. A.

TITLE: Corrosion inhibitors for reinforcement bars in concrete
containing calcium chloride

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 290, abstract,
231272 (Tr. N.-1. in-ta betona i zhelezobetona Akad. str-va
i arkhitekt. SSSR, no. 22, 1961, 40 - 53)

TEXT: An investigation of the mechanism of reinforcement iron corrosion
in concrete with additions of CaCl_2 and NaNO_2 has shown that the process
takes place with diffusion control. It is noted that NaNO_2 is an
effective corrosion inhibitor for reinforcements, due to its power of
rapidly creating or healing protective films, passivating the metal
thereby. The addition of NaNO_2 together with CaCl_2 will increase the
strength of concrete without making plastic deformation any greater than

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...inhibitors for reinforcement... 3/051/61/000/023/030/061
B133/B101

...in concrete without these additions. [Abstracter's note: Complete translation.]

✓

Card 2/2

ZASHCHEPIN, A.N.; SHESTOPEROV, S.V., prof., red.; SMIRNOVA, I.A.,
red.

[Use of plasticizing and air absorbing additives in cement
concrete] Primenenie plastifitsiruiushchikh i vozdukhovov-
lekaiushchikh dobavok v tsementnom betone. [n.p.] Rosvuziz-
dat, 1963. 11 p. (MIRA 17:11)

ZASHCHEPIN, A.N., kand. tekhn. nauk. SHESTOPEROV, S.V., prof.,
red.; SMIRNOVA, I.A., red.

[Use of chlorides in road concrete] Primenenie khlori-
stykh solei v dorozhnom betone. [n.p.] Rosvuzizdat,
1963. 12 p. (MIRA 17:12)

SHRESTOI'BAOV, S.V.; SMIRNOVA, I.A., red.

[Durability of concrete] Dolgovechnost' betona. [n.p.]
Rosvuzizdat, 1963. 46 p. (MIRA 17:6)

1. Moscow. Avtomobil'no-dorozhnyy institut. Otdeleniye
usovershenstvovaniya rukovodyashchikh i inzhenerno-
tekhnicheskikh rabotnikov.

VOLKOV, V.G., dots., kand. tekhn. nauk; SHESTOPANOV, S.V., prof.,
doktor tekhn. nauk, rel.; SMIRNOVA, I.A., red.

[Slag cements] Shlakovye tsementy. [n.p.] Rosvuzizdat,
1963. 14 p. (MIRA 17:6)

СЕМЕНОВ, В., СЕМЕНОВА, Л.А., ред.

[Cement and their structural and engineering properties]
TSementy i ikh stroitel'no-tekhnicheskie svoistva.
Izdatel'stvo Vysshaya shkola, 1964. 57 p. (MIRA 18:5)

SMIRNOVA, I.A.; RATENOV, V.B.

Study of the creep and shrinkage of gypsum-cement-porcellanic
products. Stroi. mat. 10 no.10:13-15 1964. (MIRA 18:2)

ACC NR: AP7001392

(A)

SOURCE CODE: UR/0413/66/000/021/0061/0061

INVENTORS: Smol'kova, V. S.; Yemel'yanov, N. M.; Yampol'skaya, E. G.; Smirnova, I.

A.

ORG: none

TITLE: A method for obtaining an electrode paste for lead batteries. Class 21, No. 187857

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 61

TOPIC TAGS: lead, storage battery, urea, battery

ABSTRACT: This Author Certificate presents a method for obtaining an electrode paste for lead batteries. The paste is based on lead powder and is deposited on plates and dried. To increase the capacity of the battery, the lead powder is mixed with urea. To this dry mixture rubber cement is added. The amount of urea introduced may range from 3 to 20%.

SUB CODE: 10/ SUBM. DATE: 24May63

Card 1/1

UDC: 621.3.035.4

STOLYAROVA, I.A.; SMIRNOVA, I.B.

Determination of fluorine by the photocolometric method. Inform.
sbor. VSEGEI no.18;37-46 '59. (MIRA 13:11)
(Fluorine--Analysis)

SMIRNOVA, I. B., Cand Biol Sci -- (diss) "Research into the temperature dependence of processes occurring in the cell as a result of ionizing radiation (experiments on *Paramecium caudatum*)." Moscow, 1960. 16 pp with graphs; (Academy of Sciences USSR, Inst of the Morphology of Animals im A. N. Severtsov); 150 copies; price not given; (KL, 17-60, 148)

SMIRNOVA, I.B.

Injurious effect of an X-irradiated medium in relation to
temperature. TSitologiya 2 no.3:371-373 My-Je '60. (MIRA 13:7)

1. Laboratoriya radiobiologii Instituta morfologii zivotnykh
AN SSSR, Moskva.
(X RAYS--PHYSIOLOGICAL EFFECT) (PARAMECIUM)

SMIRNOVA, I.B.

Quantitative estimation of radiation injury in mucosal crypts of
the small intestine. Radiobiologia 1 no.2:264-269 '61. (MIRA 14:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR,
Moskva.

(X RAYS—PHYSIOLOGICAL EFFECT)
(INTESTINES)

SHAPIRO, I.M.; SMIRNOVA, I.B.

Count of cells with anaphasic bridges and acentric phragments as a basis for biological estimation of radiation dose in mammals. Dokl. AN SSSR 138 no.4:945-947 Je 1961. (MIRA 14:5)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR. Predstavleno akademikom Yu.A. Orlovym.

(RADIATION-DOSAGE) --(CHROMOSOMES)

SMIRNOVA, I. B.

Investigations on Radiation Protection in Mammals

E. Ya Grinevsky, N. P. Baraklas, M. M. Constantinova and I. B. Smirnova

Radiation protectors varying in their structure and physiological effect can be divided by their mechanism of protective action into two groups. One group acts by causing tissue hypoxia, while the protective action of the second group appears not to be related to the oxygen effect.

Protectors of the second group show a clear morphological protection of animals exposed to radiation, decreasing the damage to the intestine and haemopoietic tissues. Under the action of an example of this group, aminocethylisouronium-Br-HBr (AET), repair processes are accelerated, and fewer chromosomal aberrations are seen and the ability of cells to undergo division is restored, although there is no diminution in the initial number of cells of the intestinal crypts disrupted as a result of irradiation.

Haemopoietic tissue, irradiated in the presence of AET, shows a greater number of intact cells and regeneration is greatly accelerated.

The intensification of repair processes observed in radiosensitive tissues seems to be determined by a smaller initial damage of their component cellular elements.

Institute of Animal Morphology, Academy of Sciences of the USSR, Moscow

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

SMIRNOVA, I. B.

(d)
A Biological Method for Revealing Irradiated Parts of the Body and for Evaluation of Radiation Dose

I. M. Shapiro and I. B. Smirnova

Chromosome abnormalities in the form of anaphase bridges and acentric fragments in the corneal epithelium were induced only by local irradiation of the eye of single or parabiotic mice. The incidence of most abnormalities was the same whether the head only or the whole body was exposed to radiation. Within the range of 100 to 400 r of X-rays, the dose-response curve was linear.

The evidence of chromosome abnormalities in the epidermis of the ear increased linearly with dose after whole-body exposure to 100-200 r of X-rays (200 KV; 15 mA; 0.75 mm Al+0.5 mm Cu) or to 200-600 r of ⁶⁰Co γ-rays. At a dose level of 200 r, the RBE was about 0.7 to 0.8.

Institute of Animal Morphology, Academy of Sciences of the USSR

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

11529
S/205/62/002/005/016/017
D243/D307

271220

AUTHOR: Smirnova, I.B.

TITLE: The effect of aminoethylisothiuronium. Br. HBr. (AET) on radiation destruction of the mucous membrane of the small intestine

PERIODICAL: Radiobiologiya, v. 2, no. 5, 1962, 768 - 772.

TEXT: To provide fuller information about the changes occurring in the irradiated intestine, the effect of AET as a radioprotective agent for the small intestine, and the restoration of cell division after irradiation, were investigated by a quantitative method, suggested earlier by the author (Radiobiologiya, 1, 264, 1961). Male and female white mice, 20 - 22 g in weight, received a single, full body x-ray dose of 700 or 1300 r. The radiation conditions were 250 kv, 15 ma, 0.75 mm Al + 0.50 mm Cu, 50 r/min. 7-9 minutes before radiation each test mouse received subcutaneously 10 mg AET in 0.5 ml water. The irradiated mice were killed 2, 6, 24, 48 and 72 hours after radiation and the duodenum was examined histologically. The damage was assessed by the average number of cells along the

The effect of ...

S/205/62/002/005/016/017
D243/D307

center line of crypts, by the mitotic index, and by the number of cells with chromosomal aberrations. The author concludes that ADT was an effective radioprotective agent, as evidenced only slightly at 700 r by a reduction in the number of cells showing early chromosomal aberrations. At 1300 r the effect was much clearer and depended on an increased post-irradiation recuperative capacity of the intestinal epithelium. It is suggested that this is associated with the reduction in the number of cells showing chromosomal aberration and with the increased capacity of the intestinal crypt cells for division. There are 3 figures. X

ASSOCIATION: Institut morfologii zhivotnykh im. A.N. Severtsova,
Moskva (Institute of Animal Morphology im. A.N.
Severtsov, Moscow)

SUBMITTED: February 1, 1962

Card 2/2

43190

5/205/62/002/006/015/021
E027/E410

27.12.66
AUTHORS: Smirnova, I.B., Shapiro, I.M.

TITLE: Cytological analysis of changes in the epithelium of the mucosa of the small intestine in mice caused by general X-irradiation

PERIODICAL: Radiobiologiya, v.2, no.6, 1962, 897-902

TEXT: Mice subjected to total body X-irradiation in doses of 200, 400, 700, 1000, 1300, 2000 and 3000 r were killed after 2 and 6 hours and 1, 2 and 3 days and the duodenum was examined histologically. 24 Hours after irradiation the number of cells along the midline of the crypts had fallen and, with doses of 700 to 3000 r was only 40% of normal; 3 days later recovery had taken place in the crypts in animals given 400 and 700 r, whereas with 1300 to 4000 r a further fall to 20% of normal had occurred. In the villi the number of cells fell to about 30% of normal 48 hours after doses of 700 and 1000 r, and they showed dystrophic and necrobiotic changes. Death of the cells in the crypts in the early stages after irradiation occurred in interphase and was not associated with chromosome abnormalities. The
Card 1/2

GRAYEVSKIY, E.YA; BARAKINA, N.F.; KONSTANTINOVA, M.M.; SMIRNOVA, I.B.

Studies on radiation protection in mammals. Zhur, ob. biol.
24 no.3:182-193 My-Je'63. (MIRA 16:8)

I. A.N.Severtzov Institute of Animal Morphology, Academy of
Sciences of the U.S.S.R., Moscow.
(RADIATION--PROTECTIVE AGENTS)

ACCESSION NR: AP4027975

S/0205/64/004/002/0248/0252

AUTHOR: Smirnova, I. B.

TITLE: Effect of sodium nitrate on radiation injury of the small intestine

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 248-252

TOPIC TAGS: X-irradiation, sodium nitrate, sodium nitrate radioprotective action, small intestine, small intestine crypt epithelium, 700 r radiation dose, 1300 r radiation dose, mitotic index, chromosome aberration, radiation reversible change, radiation irreversible change, cell regeneration, survival rate, tissue hypoxia

ABSTRACT: The effect of sodium nitrate on radiation injuries and regeneration processes was investigated in the epithelium of small intestine crypts in white mice. Animals were X-irradiated (200 kv, 15 ma, 50 r/min) with single total doses of 700 and 1300 r. Sodium nitrate (3.2 mg in 0.5 ml water) was administered to experimental animals 40 min before irradiation. Animals were killed 24, 48, 72, and 96 hrs after irradiation. A section of the duodenum near the

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Card

ACCESSION NR: AP4027975

pylorus was prepared for histological examination. The number of cells along the crypt center line, mitotic activity, and number of cells with chromosome aberrations served as indices. Sodium nitrate was found to be an effective radioprotector only when X-irradiation produces irreversible changes (1300 r dose). This radioprotective action is demonstrated by the higher number of viable cells whose regenerative capacity is restored earlier. Almost complete regeneration of crypt cells takes place in these protected animals by the fourth day, at which time they are dying (average lifetime is 4.1 ± 0.5 days compared to 3.5 ± 0.1 days for irradiated control animals). With a 700-r dose, which produces reversible changes, no evidence of sodium nitrate radioprotective action was found. Sodium nitrate, like AET, is effective only with high radiation doses, but the action mechanisms are different. The radioprotective action mechanism of sodium nitrate is related to tissue hypoxia, and that of AET and other monothiois is not. Orig. art. has: 3 figures.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova AN SSSR (Institute of Animal Morphology AN SSSR)

Card 2/3

PHASE I BOOK EXPLOITATION

SOV/3944

Smirnova, Ida Davidovna, Engineer, and Viktor Nikolayevich Zenzin, Candidate of Technical Sciences

Svarka khromistykh zharoprochnykh staley (Welding of Heat-Resistant Chromium Steels) Leningrad, 1958. 23 p. (Series: Informatsionno-tehnicheskii listok, no. 95-96. Svarka i payka) 6,200 copies printed.

Ed.: Z. M. Ryzhik, Engineer; Tech. Ed.: D. P. Freger.

PURPOSE: This booklet is intended for technical personnel in steel mills.

COVERAGE: The authors discuss the problem of the use of chromium-alloy steels with satisfactory weldability for the manufacture of turbine blades working at elevated temperatures (535° to 580°C). The physical and chemical properties of such chromium-alloy steels and filler metals for welding and surfacing are also discussed. No personalities are mentioned. There are 7 references, all Soviet.

Card 1/2

66505

SOV/137-59-7-15669

18.7200

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, No 7, pp 123 - 124 (USSR)

AUTHORS: Zemzin, V.N., Petrov, G.L., Smirnova, I.D., Soldatova, A.S., Kakstov, A.A.,
Kopelovich, K.I.

TITLE: Welding Cast Austenitic LA3 Steel

PERIODICAL: Tr. Novsk. mashinostr. z-da, 1958, No 4, pp 104 - 118

ABSTRACT: Austenitic Cr-Ni LA3 steel is used in steam equipment production at super-high parameters. Electrodes were designed and technology of welding-up casting defects and welding slide-plates to rolled Cr-Ni-steel pipes was developed. Requirements to heat-resistance of weld joints are the same as to steel for machine part castings: at 580 - 600°C and 100,000 hours operation σ_{pl} was ≥ 14 kg/mm²; and σ_{pl} was ≥ 6 kg/mm² at an elimination of $1 \cdot 10^{-5}$ %/hour and $a_k \geq 4$ kgm/cm². Formation of hot cracks in the seam metal are characteristic of LA3 steel welding. S, Si, Mn, and sometimes P, further hot crack formation by the development of low-melting eutectics. The presence of a second phase, δ -ferrite in the given case, reduces the probability of hot crack formation in the seam metal and granulates the structure. Taking into account the dilution of the seam

Card 1/2

SMIRNOVA, I D.

PHASE I BOOK EXPLOITATION

SOV/4015

Zemzin, Viktor Nikolayevich, Candidate of Technical Sciences, and Ida Davidovna Smirnova, Engineer

Svarnyye soyedineniya raznorodnykh khromistykh i perlitnykh zharoprochnykh staley (Welded Joints of Different Chromium and Pearlitic Heat-Resistant steels) Leningrad, 1959. 23 p. (Series: Leningradskiy dom nauchno-tekhnicheskoy propagandy. Obmen peredovym opytom. Seriya: Svarka i payka metallov, vyp. 4) 6,500 copies printed.

Sponsoring Agencies: Leningradskiy dom nauchno-tekhnicheskoy propagandy; Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed.: Z. M. Ryzhik, Engineer; Tech. Ed.: M. M. Kubneva.

PURPOSE: This booklet is intended for welding engineers and skilled welders. It may also be used by students of welding technology.

COVERAGE: The booklet deals with welding of chromium and pearlitic steels. Such welds are often encountered in gas and steam turbines where the blades are frequently made of chromium steel; for less critical components pearlitic

Card 1/2

13(5,7)

SOV/135-59-9-3/23

AUTHORS:

Shorshorov, M. Kh., Zamzin, V. N., Candidates of Technical Sciences; Balov, V. V., and Smirnova, I. D., Engineers

TITLE:

Research on Weldability of Heat Resistant Steels Containing 12% Chromium

PERIODICAL:

Svarochnoye proizvodstvo, 1959, No 9, pp 6-10 (USSR)

ABSTRACT:

The authors state that the use of higher working temperatures (565-580°C) with present day steam turbines need heat resistant steels for the more heated parts. Therefore research was done on the weldability of heat resistant steels containing about 12% chromium. Chromium steels without additional alloys (Type 2Kh13, 1Kh13, 03Kh12) and reinforced steels (Type 15Kh11MF, 15Kh11WF, 15Kh11MFB, 15KhVWF, 15Kh12VWF with Ti, Nb and B, 25Kh11BWF) were investigated. The influence of the welding on structure and qualities of the zone near the weld was investigated by the method IMET-1 [Ref 4] under conditions of arc welding with maximum temperatures. $T_{max} = 1370 - 1400^{\circ}C$, and cooling speed $W_{okh1} = 0.1 - 600^{\circ}C/sec$

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SOV/135-59-9-3/23

Research on Weldability of Heat Resistant Steels Containing 12% Chromium

in an interval of 750 - 650°C. The change of the mechanical qualities of chromium steels under the influence of the thermal cycle of welding (Table 2) shows, that in steels without alloying addition the carbon content has a considerable influence. Fig 1 shows the change of the mechanical qualities in the zone near the weld of steels with 12% chromium dependent on the cooling speed in intervals of 750 - 650°C. Research has shown that in steels without reinforcing alloys a lower cooling speed leads to a considerable increase of granulation and a decrease of plasticity. Chromium steels with 12% Cr and with reinforced and alloying addition are less sensitive to a change of the thermal cycle parameter when welding, and they have less tendency to an increased granulation in the zone near the weld. Several results given by E. A. Kheyn, Engineer, were used in this study. There are 8 photographs, 1 drawing, 4 graphs, 4 tables and 6 references, 5 of which are Soviet and 1 German.

Card 2/3

SOV/135-59-9-3/23

Research on Weldability of Heat Resistant Steels Containing 12% Chromium

ASSOCIATIONS: Institut metallurgii imeni A. A. Baykova AN SSSR (Institute of Metallurgy imeni A. A. Baykov) (Shorshorov, M. Kh. and Bolov, V. V.); Tsentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut imeni I. I. Polzunova (Central Scientific Research Institute for Boilers and Turbines imeni I. I. Polzunov) (Zemzin, V. N. and Smirnova, I. D.)

Card 3/3

ZEMZIN, V.N., kand.tekhn.nauk; SMIRNOVA, I.D., inzh.; GONSEROVSKIY, F.G.,
inzh.; BIRYUKOV, V.M., inzh.

Welding high-chromium heat-resistant steel for steam turbine
parts. Trudy LMZ no.9:159-174 '62. (MIRA 16:6)
(Steel, Heat-resistant--Welding)
(Steam turbines--Design and construction)

L 7999-66 EMT(m)/EWA(d)/EWP(t)/EWP(a)/EWP(b) IJP(c) JD
ACC NR: AP5026533 SOURCE CODE: UR/0286/65/000/019/0073/0073

INVENTOR: ^{44.55}Lanskaya, K. A.; ^{44.55}Gorchakova, E. N.; ^{44.55}Surovtseva, Ye. D.; ^{44.55}Lapitskaya, Ye. M.;
^{44.55}Malysheva, V. P.; ^{44.55}Zemzin, V. N.; ^{44.55}Smirnova, I. D.

TITLE: Ferritic steel. Class 40, No. 175238 [announced by the Central Scientific
Research Institute of Ferrous Metallurgy im. I. P. Bardin (Tsentral'nyy nauchno-
issledovatel'skiy institut chernoy metallurgii)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 73

TOPIC TAGS: steel, ferritic steel, heat resistant steel, ^{44.55}silicon containing steel,
manganese²containing steel, chromium²containing steel, molybdenum²containing steel,
vanadium²containing steel, niobium²containing steel, tungsten²containing steel

ABSTRACT: This Author Certificate introduces a ferritic steel containing silicon,
manganese, chromium, molybdenum, vanadium, niobium, and tungsten. In order to in-
crease the rupture and creep strength, the steel has the following composition in %:
0.08-0.15 C, 0.4-1.0 Si, 0.4-1.0 Mn, 2.0-10.0 Cr, 0.5-2.0 Mo, 0.15-0.50 V,
0.5-1.5 Nb, and 6-10 W. [ww]

SUB CODE: MM/ SUBM DATE: 09Apr64/ ATD PRESS: 4145

Cord 1/1 ^{nw} IDC: 669.15-194.57

5(4), 21(1)

SOV/78-4-1-9/48

AUTHORS:

Klygin, A. Ye., Smirnova, I. D.

TITLE:

On the Instability Constant of the $\text{UO}_2(\text{CO}_3)_3^{4-}$ Ion (O konstante nestoykosti iona $\text{UO}_2(\text{CO}_3)_3^{4-}$)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 1, pp 42-45 (USSR)

ABSTRACT:

A direct determination of the dissociation constant of $\text{UO}_2(\text{CO}_3)_3^{4-}$ was carried out by the solubility method. Uranyl oxyquinolate was used as solid phase. On reciprocal action of uranyl oxyquinolate and alkali and ammonium carbonate solutions the complex $\text{UO}_2(\text{CO}_3)_3^{4-}$ is formed. The stability constant of $\text{UO}_2(\text{CO}_3)_3^{4-}$ was calculated at 25° and $\mu = 1.0$.

$$K = \frac{[\text{UO}_2^{2+}][\text{CO}_3^{2-}]^3}{[\text{UO}_2(\text{CO}_3)_3^{4-}]} = (1.7 \pm 0.6) \cdot 10^{-23} \text{ at } 25^\circ$$

$\mu = \text{ionic strength}$

There are 1 figure, 1 table, and 14 references, 11 of which are Soviet.

Card 1/2

5(2)
AUTHORS: Klygin, A. Ye., Smirnova, I. D., Nikol'skaya, N. A. SOV/78-4-7-37/44

TITLE: The Equilibria in the System $UO_2(JO_3)_2 - KJO_3 - H_2O$ (Ravno-
vesiya v sisteme $UO_2(JO_3)_2 - KJO_3 - H_2O$)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7,
pp 1674-1676 (USSR)

ABSTRACT: The investigation was carried out for the purpose of determin-
ing the optimum conditions for the precipitation of uranium as
uranyl iodate. Table 1 gives the investigation results at 25°,
and table 2 those at 60°. The solubility of $UO_2(JO_3)_2$ decreases
with increasing concentration of the KJO_3 because of salting
out and attains the minimum value at $[JO_3^-] = (1.00 \pm 0.18)^{-1}$
mol/l. A further increase of the potassium iodate concentration
(up to $2.09 \cdot 10^{-1}$ mol/l) increases solubility as a result of
complex formation. The dissociation constants of the ion
 $UO_2(JO_3)_3$, the compound $UO_2(JO_3)_2$, and the solubility product
for $UO_2(JO_3)_2$ are calculated. Precipitation of uranium as

Card 1/2

SOV/78-4-7-37/44

The Equilibria in the System $UO_2(JO_3)_2 - KJO_3 - H_2O$

$UO_2(JO_3)_3$ cannot be used for a quantitative analytical determination because of the high solubility of the precipitate. There are 2 tables and 5 references, 3 of which are Soviet.

SUBMITTED: April 7, 1958

Card 2/2

05887

SOV/78-4-11-40/50

5(2)
AUTHORS:

Klygin, A. Ye., Smirnova, I. D., Nikol'skaya, N. A.

TITLE:

Investigation of the System $UO_2(NO_3)_2$ - Ethylene-diamine-tetraacetic Acid - Water by the Solubility Method

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, PF 2623-2629 (USSR)

ABSTRACT:

A short publication survey (Refs 1-6) shows that the ethylene-diamine-tetraacetic acid (H_4R) yields solid compounds with many metal ions, but not with the uranyl ion. According to H. Brintzinger and G. Hesse (Ref 3), however, uranyl nitrate forms with H_4R the compound $UO_2 \cdot H_2R \cdot H_2O$ to be solved with difficulty. The authors tried to determine the solubility product of this compound and the instability constant of the complex ions within the range of pH = 2.0 - 8.0. In the theoretical part, the computation of pH, for which a maximum yield of $UO_2 \cdot H_2R$ is to be expected, as well as of the solubility product and of the instability constant is carried out on the basis of N. P. Komar's data (Ref 7). The existence of the compound $UO_2 \cdot H_2R \cdot H_2O$ is

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05887

SOV/78-4-11-40/50

Investigation of the System $\text{UO}_2(\text{NO}_3)_2$ - Ethylene-
diamine-tetraacetic Acid - Water by the Solubility Method

experimentally confirmed, and the solubility product is determined at $\text{pH} = 3.0 - 4.5$ (range of maximum yield). The equilibrium in the system uranyl nitrate - ammonium salt of H_4R only occurs after nine days. The content of H_4R was determined by the potentiometer of type PPTV-1. Table 1 shows that the solubility product is constant in the interval of hydrogen ion concentration from $1 \cdot 10^{-3}$ to $2.5 \cdot 10^{-5}$ and amounts to $(2.3 \pm 0.2) \cdot 10^{-6}$ at 25° . In solutions with $\text{pH} > 5$, the solubility of $\text{UO}_2\text{H}_2\text{R}$ increases rapidly due to the formation of complex compounds. The instability constant of the complex compound UO_2HR^- is $(7.4 \pm 0.4) \cdot 10^{-5}$ at 25° . Other complex compounds do not develop. The negative charge of this ion was confirmed by adsorption on the cation exchanger KU-2. It is concluded from the experimental results: as the complex ion UO_2HR^- only forms at $\text{pH} > 3$, various ions can be determined by means of RH_4 in solutions with a lower pH . The computation

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05887

Investigation of the System $UO_2(NO_3)_2$ - Ethylene - diamine-tetraacetic Acid - Water by the Solubility Method SOV/78-4-11-40/50

according to K. B. Yatsimirskiy (Ref 16) shows that Ga^{3+} , Y^{3+} , Gd^{3+} , Lu^{3+} , Fe^{3+} , Sc^{3+} , In^{3+} , Th^{4+} can be titrated with H_4R (or its salts) in the presence of uranyl ions with an error of less than 0.1%. As the complex formation of uranyl with H_4R is unstable, the uranium can be precipitated with reagents such as 8-oxyquinoline (Ref 15), ammonium phosphate (Ref 17), diethyl-dithiocarbamate (Ref 6) etc also at pH-values at which the complex formation takes place. Though the precipitation of uranium in the form of ethylene-diamine tetraacetate is possible, it is not applicable in practice due to the slow establishment of equilibrium. There are 3 tables and 19 references, 9 of which are Soviet.

SUBMITTED: May 6, 1958

Card 3/3

KLYGIN, A.Ye.; SMIRNOVA, I.D.

Solubility of 1,2-diaminocyclohexanetetraacetic acid in ammonia
and hydrochloric acid. Zhur.ob.khim. 32 no.4:1259-1262 Ap
'62. (MIRA 15:4)
(Cyclohexanetetra-carboxylic acid) (Ammonia) (Hydrochloric acid)

KLYGIN, A.Ye.; ZHURAVLEV, G.I.; SMIRNOVA, I.D.

Protolytic equilibrium of neutral red in hydrochloric acid
solutions. Zhur. anal. khim. 19 no.6:657-659 '64. (MIRA 18:3)

VALEYEV, Sh.V.; ZUBKOV, P.S., red.; SMIRNOVA, I.I. red.; ZAYNULLIN, I.Kh.,
tekhn. red.

[Special features of growing seed corn.] Osobennosti vozdelevaniia
kukuruzu na semena. Pod red. P.S. Zubkova. Kazan', Tatknigoizdat,
1957. 44 p. (MIRA 11:10)

(Corn (Maize))

PETROV, L.G.; LAVINSKIY, G.N., kand. sel'khoz. nauk, red.; SMIRNOVA, I.I.,
red.; ZAYNULLIN, I.Kh., tekhn. red.

[Production of field crop seeds in the Tatar A.S.S.R.] Semenovodstvo
polevykh kul'tur v Tatarii Pod red. G.N.Lavinskogo. Kazan', Ta-
tarskoe knizhnoe izd-vo, 1959. 132 p. (MIRA 14:10)
(Tatar A.S.S.R.—Seed production)

NIKITIN, Faust Vasil' yevich, laureat Stalinskoy premii, zootekhnik; SMIR-
NOVA, I.I., red.; TROFIMOVA, A.S., tekhn. red.

[Rabbit raising] Krolikovodstvo; posobie.... Izd.2., oop. Kazan',
Tatarskoe knizhnoe izd-vo, 1959. 182 p. (MIRA 14:9)
(Rabbits)

ABUZAROV, Kh.G.; SMIRNOVA, I.I., red.

[Antibiotics and biogenic stimulators in animal husbandry] Antibiotiki i biogennye stimulyatory v zhivotnovodstve. Kazan' Tatarskoe knizhnoe izd-vo, 1964. 62 p.
(MIRA 18:2)

RABINOVICH, L.M.; SMIRNOVA, I.I., red.; GALKINA, V.N., tekhn.red.

[The collective farm "Put' Il'icha" switches to monetary wages]
Kolkhoz "Put' Il'icha" perekhodit na denezhnuu oplatu truda.
Kazan', Tatarskoe knizhnoe izd-vo, 1960. 33 p.

(MIRA 14:1)

(Collective farms--Income distribution)

KURNYSHOV, V.M.; SMIRNOVA, I.I., red.; KHUSNUTDINOV, Sh.S., tekhn.red.

[Rural efficiency promoters and inventors of the Tatar A.S.S.R.]
Sel'skie ratsionalizatory i izobretateli Tatarskoi ASSR. Kazan',
Tatarskoe knizhnoe izd-vo, 1960. 65 p. (MIRA 14:1)
(Farm mechanization)

PA 192T43

SMIRNOVA, I. I.

USSR/Chemistry - Oxidants

Sep 51

"Kinetics of Reactions Taking Place Under Participation of Solid Substances. Applicability of the Generalized Equation of Chemical Kinetics to the Thermal Decomposition of Potassium Permanganate,"
B. V. Yerofeyev, I. I. Smirnova

"Zhur Fiz Khim, Vol XXV, No 9, pp 1098-1102

Investigated kinetics of thermal decompn of unre-crystd $KMnO_4$ at 218° and found that this process occurs according to eq $\alpha = \exp(-kt^2)$, where α indicates the fraction that decompd. The 2-power indicates that whole crystal facets function as reaction centers.

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SMIRNOVA, I. I.

USSR/Chemistry - Potassium Permanganate Sep 52

"Kinetics of Thermal Decomposition of Potassium Permanganate," B. V. Yerofeyev and I. I. Smirnova, Inst of Chem, Acad Sci Belorussian SSR, Minsk

Zhur Fiz Khim, Vol 26, No 9, pp 1233-1243

Studied the kinetics of the thermal decompn of crushed and uncrushed recrystallized $KMnO_4$ in a temp range of 211.50-227.60 C. Discovered that the decompn of $KMnO_4$ has a typical autocatalytic character and that practically the entire range of the reaction can be quantitatively described by the Kolmogorov-Yerofeyev eq. The values of "n", in most cases, were close to

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four or five, thus indicating single-stage and double-stage processes in the formation of the starting centers of the reaction, which arise at separate points on the surface of the crystals. The crushing of the $KMnO_4$ crystals did not change the general character of the kinetics of the reaction and left the value of "n" without substantial change. This led the authors to discount the theory of E. G. Prout and F. C. Tompkins (Trans. Farad Soc, Vol 40, 488, 1944).

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SMIRNOVA, I. I.

USSR/Chemistry - Autocatalysis

Card 1/1 Pub. 147 - 17/26

Authors : Smirnova, I. I.

Title : Autocatalysis of solid bodies as an example of thermal decomposition of $KMnO_4$.

Periodical : Zhur. fiz. khim. 29/1, 135-141, Jan 1955

Abstract : The probability of origination of reaction nuclei was investigated during thermal decomposition of potassium permanganate ($KMnO_4$) at a temperature range of 211.5 - 227-6 C. The kinetics of this process was established by studying the mean reaction probability during thermal decomposition of $KMnO_4$. A considerable drop in the rate of reaction was observed during the intersection of reaction nuclei. The probability of origination of reaction nuclei in hetro- and homogeneous reaction processes is discussed. Four references: 3 USSR and 1 USA (1944-1953). Diagrams.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : May 31, 1954

SMIRNOVA, I.I.

Activation energy of the thermal decomposition of potassium permanganate. Zhur. fiz. khim. 30 no.12:2649-2655 D'56. (MLRA 10:4)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. N.E. Baumana.
(Potassium permanganate) (Dissociation)

DYTNERSKIY, Yu.I.; KASATKIN, A.G.; KOCHERGIN, N.V.; Prinimali uchastiye:
SMIRNOVA, I.M.; GROMOGLASOVA, O.M.

Mass transfer on valve and ballast plates. Zhur.prikl.khim.
35 no.10:2247-2251 O '62. (MIRA 15:12)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I.
Mendeleyeva.

(Plate towers) (Mass transfer)

GROMOVAIA, Ye.F., starshiy nauchnyy sotrudnik; SMIRNOVA, I.M.,
mladshiy nauchnyy sotrudnik

Controlling apple-tree borer. Zashch. rast. ot vred. i bol.
9 no. 4:30-31 '64. (MIRA 17:5)

1. Slavyanskaya baza Vsesoyuznogo instituta zashchity rasteniy.

ANDRIYVA, I. P.

ANDRIYVA, I. P. -- "STABILITY OF AUTOMATIC CONTROL SYSTEMS CONTAINING AN UNSTABLE ELEMENT,"
DIPLOMA THESIS, INST. OF AUTOMATIC AND TECHNOLOGICAL, ACAD. SCI. USSR (DISSERTATION FOR
THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCES)

IN: TEKHNIKA I NAUKA, SANKAY-HI COM. 1952

SMIRNOVA, I. M.

AIZERMAN, M.A.; SMIRNOVA, I.M.

Note on E.P.Popov's article "Approximate calculation of natural and forced vibrations in nonlinear systems." (Izv. AN SSSR, OTN, no.5, 1954). Izv. AN SSSR Otd. tekhn. nauk no.10:185-189 0 '54.
(Vibrations)(Popov, E.P.) (MIRA 8:3)

SMIRNOVA, I. M.

On the Approximate Investigation of Stability Conditions of Periodic Circuits
in Systems of Automatic Regulation
Avtomatika i telemekhanika, Vol 15, No 2, 1954, pp 97-106

The author examines the equation $D(p)x = K(f(x) + A \sin wt)$, where $D(p)$ is a polynomial with real coefficients, $f(x)$, is a given odd function and A , w , and K are positive numbers. By the method of harmonic balance of the problem of the approximate determination of periodic solutions of the form $x = C \sin (wt - g)$ is considerably simplified. The abstractor, M. A. Ayzerman, states that the author incorrectly extends her results to the case where K in the first equation is a polynomial. (RZhMat, No 5, 1955)

SO: Sum. No. 639, 2 Sep 55

SMIRNOVA, I.M.

Organization of the All-Moscow Seminar on Mathematical Problems in
the Theory of automatic control. Avtom. i telem. 15 no.5:458-459
S-O 154. (MLHA 8:1)
(Automatic control)

Abs.- W-31148, 7 Feb 55

SOV/124-57-5-5181
Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 12 (USSR)

AUTHORS: Ayzerman, M. A., Smirnova, I. M.

TITLE: On the Application of the Small-parameter Methods in the Investigation of the Periodic Modes of Oscillation of Automatic-control Systems Which do not Contain a Small Parameter (O primeneniі metodov malogo parametra dlya issledovaniya periodicheskikh rezhimov v sistemakh avtomaticheskogo regulirovaniya, ne sodержashchikh malogo parametra)

PERIODICAL: V sb.: Pamyati Aleksandra Aleksandrovicha Andronova. Moscow, Izd-vo AN SSSR, 1955, pp 77-92

ABSTRACT: The paper discusses methods of the approximate determination of the periodic modes of oscillation in nonlinear automatic control systems. The discussion refers to those methods which are based on the assumption of a proximity of these modes of operation to harmonic oscillations. Two hypotheses are analyzed (the hypothesis of self-resonance and the filter hypothesis) which in many cases allow a substantiation of the approximate methods. The paper describes methods for the solution of problems of the determination and problems of the

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SOV/124-57-5-5181

On the Application of the Small-parameter Methods in the Investigation (cont.)

stability of periodic modes of oscillation based on the above-mentioned hypotheses. In the case of self-resonance the authors consider the approximate methods for determining the periodic modes of oscillation, as well as the methods for investigating their stability, to be sufficiently substantiated. In case of a filter the application of the assumption of a small difference between the periodic mode of oscillation from the harmonic oscillation alone is formally justified. The article shows, however, that even in that case, in a number of cases [such as with odd constant-sign nonlinearity of $f(x)$], good results are obtained with the "illegitimate" application of methods corresponding to the assumption of the presence of a generating frequency of the approximate system which strictly speaking applies to small-parameter systems only.

N. N. Krasovskiy

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SMIRNOVA, I. M.

★ Smirnova, I. M. On stability of approximately determined periodic regimes of automatic control. Trudy vtorogo vsesoyuznogo soveshchaniya po teorii avtomatičeskogo regulirovaniya, Tom I [Transactions of the second all-union congress on the theory of automatic control, Vol. I], pp. 193-203. Izdat. Akad. Nauk SSSR, Moscow-Leningrad, 1955. (Russian)

The Krylov-Bogolyubov method of harmonic balance is applied to automatic control systems in which the non-linear part possesses an odd characteristic. The author first derives the characteristic equation which gives approximations for the regions of stability of periodic motions under the assumptions that the given system differs slightly from the linear system with a small oscillatory degree of stability. Next conditions of stability for forced oscillation are derived which are similar to those derived by Gol'dfarb for auto-oscillations. [Avtomat. i Telemekh. 8 (1947), 349-383; MR 12, 413].
H. P. Thielman (Ames, Ia.)

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 12 (USSR) SOV/124-57-5-5178

AUTHOR: Smirnova, I. M.

TITLE: On the Stability of Approximately-determined Periodic Modes in Automatic-control Systems (Ob ustoychivosti priblizhenno nayden-nykh periodicheskikh rezhimov v sistemakh avtomaticheskogo regulirovaniya)

PERIODICAL: Tr. 2-go Vses. soveshch. po teorii avtomat. regulirovaniya. Vol I. Moscow-Leningrad, Izd-vo AN SSSR, 1955, pp 219-248

ABSTRACT: The paper examines the stability of the periodic behavior of certain nonlinear automatic-control systems. An account is given in the introduction of a method (based on the filter hypothesis) for the approximate determination of the periodic modes of the system

$$D(p)x = K(p)(f(x) + A \sin \omega t) \quad (p = \frac{d}{dt})$$

where D(p) and K(p) are polynomials. This method is in line with the works of L. S. Gol'dfarb (Avtomatika i telemekhanika, 1947, Vol 8, Nr 5, pp 349-383) and M. A. Ayzerman (Inzhenernyy sb., 1952, Vol

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