

#

344

MASLOV, V.P.

Algae in the Middle Sarmatian bioherms of Moldavia. Izv. Mold.
Fil. AN SSSR no. 6:74-83 '61 (MIRA 17:67)

007/19-59-1-101/191

5(1)

AUTHOR: Maslov V.N.

TITLE: A Method of Chromatographic Separation of Substances

PERIODICAL: Byulleten' izobreteniy, 1959, No 1, p 28-29 (USSR)

ABSTRACT: Class B3b, 103. No 117147 (576605/4864 of 6 January 1956). Submitted to the Ministry of Chemical Industry in the USSR. Washing out the different substances with the use of washing solutions; cutting the duration of the separation process by feeding the washing solution into the column through porous or perforated walls and with a varying filtration level.

Card 1/1

DAVYDOV, Vladimir Ivanovich; GURVICH, M.A., kand. khim. nauk,
rezensent; LASLOV, V.I., kand. khim. nauk, red.

[Germanium] Metall. I. kva, Metallurgiya, 1961, 131 p.
(MIRA 17:11)

L 57545-85 EWA(k)/FRD/ENG(r)/EWT(1)/EWT(m)/EEC(k)-2/EWT(1)/EEC(t)/I/EWP(t)/
EEC(5)-2/EWP(k)/EWP(b)/EWA(m)-2/EWA(h) PF-A/PI-A/PI-A/PI-A/Pn-A/Po A/Pob SCIB/
IJP(c) WG/J/JS UR/91B1/65/007/006/1902/1904

ACCESSION NO: AP5014611

AUTHOR: Basov, N. G.; Yeliseyev, P. G.; Nikitin, V. V.; Lishina, A. V.; Maslov,
V. R.; N. Shel'skiy, A. Ya.

TITLE: A semiconductor GaAs_{1-x}P_x junction laser 75

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1902-1904

TOPIC TAGS: laser, semiconductor laser, junction laser, injection laser, stim-
ulated emission, gallium arsenide, gallium phosphide

ABSTRACT: A GaAs_{0.85}Po_{0.15} pulsed injection laser operating at 77K is described.
The monocrystalline solid solution of GaAs_{0.85}Po_{0.15} was prepared by epitaxial growth
(sandwich method). The p-n junction was formed at a depth of 26 μ by diffusing zinc
at 850° for 2.5 hr into a polished 6.5 μ thick wafer of GaAs_{0.85}Po_{0.15}. Coherent
emission was observed at 7420 Å at a threshold current density of 5900 amp/cm².
A high resolution spectrum of laser emission showed multimode oscillations similar
to those of GaAs injection lasers. The high threshold current density was attri-
buted to optical inhomogeneity of the epitaxial film. Dimensions of the laser,
pulse duration, and repetition rate are not given. Orig. art. has: 2 figures.

77
78
B

[CS]

Card 1/2

I 5 545-65

ACCESSION NR: AP5014611

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moscow (Physics
Institute, AN SSSR)

SUBMITTED: 28Jan65

ENCL: 00

SUB CODE: 65

SO REY SOV: 001

OTHER: 004

ATD PRESS: 4057

Card

212

L 3593-66 EWT(i)/EWT(m)/EWP(i)/. (.) /EWP(b)
ACCESSION NR: AP5024566

IJP(c) JD/GG
UR/0070/65/010/005/0758/0760 56
548.522 50
B

AUTHOR: Maslov, V. N.; Shaforostov, M. P.
44.55 44.55

TITLE: Growth of doped acicular and filamentary gallium phosphide crystals from the gaseous phase
27 27

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 758-760

TOPIC TAGS: gallium compound, phosphide, acicular crystal, semiconductor crystal, crystal growth

ABSTRACT: The simplest equipment for growing doped acicular and ribbon-filament crystals of gallium phosphide from the gaseous phase consists of a two-zone furnace (with a temperature of 1100-1200C in the reaction zone and 400-500C in the phosphorus heating zone) and a quartz tube 100 mm in diameter in the reaction zone and 25 mm in diameter in the phosphorus heating zone. A quartz crucible is placed in the reaction zone with a 20-30 gram charge consisting of a mixture of metallic gallium with gallium oxide in a 3:1 ratio. A quartz boat is charged with 4-6 grams of red phosphorus. The phosphorus vapor is carried by a stream of pure argon to react with gallium substrate vapor formed by the reaction



Card 1/3

I. 3593-66

ACCESSION NR: AP5024566

Transparent yellow-orange acicular and ribbon-filament crystals 2—6 cm long are grown on the sides of the crucible in 2—3 hours. Since reaction products are removed from the surface of the charge by the argon stream, there is no chance of a tough surface crust of gallium phosphide preventing the evaporation of the gallium suboxide. Chemical and spectral analysis show that the impurity content in the non-doped crystals is no greater than the impurity concentration in the initial reagents. Sulfur, zinc and tellurium were used as dopants. Sulfur changes the shape of the crystals as well as the electrical and physical parameters. When 70 mg of sulfur is added to 5 g of phosphorus, 100% formation of ribbon filaments results. Zinc was introduced by adding zinc oxide to the gallium charge in the crucible, since addition of zinc to the phosphorus resulted in growth impairment and change in crystal color to grayish-orange. A third heating zone was added to the furnace for doping with tellurium. This doping method is more convenient than the other two since the impurity content can be controlled over a wide range. This method was used for producing n-type crystals of gallium phosphide with carrier concentrations from 10^{15} to 10^{17} cm^{-3} . However, the dopant content in the crystals is not a single-valued function of the tellurium vapor pressure corresponding to the temperature in the tellurium heating zone. An increase in the temperature in the phosphorus zone reduces the charge carrier concentration in the crystals. The temperature in the reaction zone also has a definite effect on the impurity concentration. High dopant concentra-

Card 2/3

L 3593-66

ACCESSION NR: AP5024566

tions cause imperfections in the crystals which make them useless for applications as finished crystals, although they make good starting material for producing epitaxial layers of gallium phosphide with the use of gas transport reactions. Orig. art. has: 3 figures, 2 formulas. [14]

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut red-kometallicheskey promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metals Industry) 21.04.55

SUBMITTED: 30Dec64

ENCL: 00

SUB CODE: SS

NO REF SOV: 002

OTHER: 001

ATD PRESS: 4114

Card 3/3

L 3075-66 EWT(1)/EWT(m)/EWP(1)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/GG

ACCESSION NR: AP5018077

UR/0020/65/163/001/0076/0078

AUTHOR: D'yakonov, L. I.¹⁹⁵⁵; Maslov, V. N.¹⁹⁵⁵; Sakharov, B. A.¹⁹⁵⁵

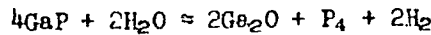
65
69
B

TITLE: Epitaxial growing of single-crystal gallium phosphide

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 76-78

TOPIC TAGS: epitaxial growing, gallium compound, semiconducting material

ABSTRACT: The purpose of the investigation was to check on the applicability of the sandwich method (E. Sirtl, J. Phys. Chem. Solids v. 24, no. 11, 1285, 1963) to the production of large plate-like gallium phosphide single crystals, and to investigate the main factors influencing the growth rate and the quality of the epitaxial layers. The epitaxial growing was by means of the gas-transport reaction with water vapor



using needle-like single crystals obtained from the gas phase by interaction between phosphorus vapor and gallium monoxide in an argon stream. The details of the growth procedure are described. Samples up to 700 μ thick were grown in 70 hours at a rate which started at 30--40 μ/hr and slowed down to 7--15 μ/hr. The presence of moisture hindered the epitaxial growth by causing oxidation of the substrate surface. The morphology of the epitaxial layers depends on the orientation of the

Card 1/2

L 3075-66

ACCESSION NR: AP5018077

surface and on the perfection of the substrate crystal structure. The best results were obtained on substrates with (111) orientation. Although the Debye pattern of the epitaxially grown single crystals indicates the presence of only one phase in the sample, the presence of several per cent of gallium arsenide impurity has been noticed. Although the content of this impurity can be reduced by lowering the substrate temperature, this leads to a deterioration of the photoluminescent and electroluminescent properties of the sample. The gallium phosphide obtained had n-type conductivity, with carrier density 10^{19} -- 10^{18} cm^{-3} , carrier mobility 114 $\text{cm}^2/\text{v-sec}$ at density 2×10^{17} cm^{-3} , and resistivity 0.2 ohm-cm at room temperature, with a gallium arsenide content of 6 mol.%. This report was presented by N. P. Sazhin. Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut red-kometallicheskoj promyshlennosti (State Scientific-Research and Design Institute of the Rare-Metal Industry)

SUBMITTED: 23Dec64

ENCL: 00

SUB CODE: 88

NR REF SOV: 002

OTHER: 009

Cord 2/2

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032810001-5

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032810001-5"

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032810001-5

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032810001-5"

1. NAME, V. . .

2. Title of Invention, Name, Address, and Telephone Number of Inventor or Assignee, Date of Filing, and Date of Issuance, if any, of Patent or Copyright, and Name of Patent or Copyright Office, if any.

3. NAME

USSR/Geology

Mar 1947

"Materials for Investigation of Fossil Algae of the USSR. Fossil Chara, Their Importance, Anatomy and Methods of Their Study," V. P. Maslov, 15 pp

"Byull Moskov Obsh Iap Pri, Nova Ser, Otdel Geol" Vol XII, No 3

After short review of importance of Chara and of usual methods for their determination, author suggests his own method based on the longitudinal trans-parent thin sections of the fossil. Gives dimensions and brief characteristic sketches for four of the oogonia fossils of the Kirghiz region: Chara merlandi Unger, Chara merlandi var. delicata var. nov., Chara

LS

49129

USSR/Geology (Contd)

Mar 1947

merlandi var. acutata, var. nov., and Chara crassa Dollfus et Fritel Gives distinguishing characteristics of each.

LC

49129

10/1/57

"The Crisis of Defense Research", Izv. Ak. Nauk SSSR, Ser. Tekhn. Nauk, 1957, No. 1, p. 1-17.

MASLOV, V.P.

Girvanella algae their ecology and stratigraphic significance.

Biol. MOIP. Otd. geol. 14 no.3:89-100 1979.

(MIRA 11:5)

(Algae, Fossil)

177T43

USSR/Geophysics - Algae, Red

Nov/Dec 50

"New Data on the Reproductive Organs of the Most Ancient Red Algae (Rhodophyceae Rhodophyta)," V. P. Maslov

"Iz Ak Nauk SSSR, Ser Geol" No 6, pp 119-128

Critically reviews existing representations of foreign investigators concerning structure and distinctive peculiarities of reproductive organs of very early red algae. Improves on these representations by using detailed Soviet data.

177T43

USSR/Geology - Stratigraphy
Algae

Jan 50

155121
"Importance of Rhodophyceae for the Stratigraphy of
the USSR," V. P. Maslov, 4 pp

"Dok Ak Nauk SSSR" Vol LXX, No 1

Isolated new families from collection of algae from
Western Georgia and Abkhazian ASSR, one of which
showed clear, comparatively rapid evolution and vari-
ability during Cretaceous period. Describes one new
family, Palaeophyllum gen. nov., and discusses im-
portance of this family and other Cretaceous forms
of Rhodophyceae in Western Georgia. Table shows

155121

USSR/Geology - Stratigraphy (Contd)

Jan 50

vertical spread of Cretaceous Rhodophyceae and an-
other leading form for Ukraine and Mediterranean
area. Submitted by Acad D. S. Belyankin 4 Nov 49.

MASLOV, V. P.

155121

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032810001-5

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032810001-5"

USSR/Geophysics - East Siberia

May/June 52

"Does an Interruption Exist Between Middle Cambrian and Verkholensk Formations in Eastern Siberia?" V.P. Maslov

"Iz Ak Nauk, Ser Geolog" No 3, pp 98-100

Discusses controversial opinions on the connection between carbonate Cambrian and red Verkholensk formation in eastern Siberia. Establishes existence of stratigraphic interruption between these eras.

22CT64

1. MASLOV, V. P.
2. USSR (600)
4. Concretions
7. Carbonaceous nodules of organic origin.
Biul. MOIF. Otd. geol. 27. No. 4. 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

SEMPANOV, V.Ya.; MASLOV, V.P.

Vasalemma facing stone; its origin and its durability in structures.
(In: Akademiia nauk SSSR. Voprasy petrografii i mineralogii. Moskva,
1953. Vol. 1, p.460-473)
(MLRA 7:4)
(Building stones)

MASLOV, V.P.

Methods of comparing sections in Carbonaceous strata. (In: *Akademiia nauk SSSR. Voprosy petrografii i mineralogii*. Moskva, 1953. Vol. 2, p.477-494)
(MLRA 7:4)
(Kuybyshev Province--Geology) (Geology--Kuybyshev Province)

1. [Illegible]
2. [Illegible]
3. [Illegible]
4. [Illegible]
5. [Illegible]
6. [Illegible]
7. [Illegible]
8. [Illegible]
9. Monthly List of Russian Accessions. Library of Congress, _____ 1993, Incl.

MASLOV, V.P.

Principles of nomenclature and systematics of stromatolites. Izv. AN SSSR.
Ser.geol. no.4:106-112 JI-ag '53. (MIRA 5:8)
(Paleobotany)

MASLOV, V.P.

Some varieties of river ripple marks and their origin. *Biul. Kom. chetv. per.*
no.17:64-75 '53.

(MLRA 6:11)

(Ripple marks)

15-87-8-8789

Translation from: Referativnyi zhurnal, Geologiya, 1957, Nr 8,
p. 8 (USSR)

AUTHOR: Maslov, V. P.

TITLE: Lower Silurian of Eastern Siberia (O nizhnem silure
Vostochnoy Sibiri)

PERIODICAL: Vestnik Geologii i Geofiziki Azii. Vol 1, Moscow, Izd-vo
AN SSSR, 1954, pp. 435-437.

ABSTRACT: Brief capsule entry

Card 1 of 1

MASLOV, V. P.

Reply to I. I. Belostotskii, *Biul. Kom. chetv. per.* no. 20:106 '55.
(Ripple marks) (MIRA 8:11)

Maslov, V. P.

USSR/Geology - Paleontology

Card 1/1 Pub. 22 - 46/53

Authors : Maslov, V. P.

Title : ~~USSR/Geology - Paleontology~~
New type of purple seaweeds from the Danish stratum of the Caucasus

Periodical : Dok. AN SSSR 102/4, 827-829, Jun 1, 1955

Abstract : Scientific data are presented on a new type of seaweeds of the Floridae class extracted from the Danish stratum of Abkazia and western Georgia bordering with the Caucasus. Two USSR references (1950). Drawing.

Institution :

Presented by : Academician N. M. Strakhov, March 29, 1955

MASLOV, V. P.

USSR/ Geology - Paleontology

Card 1/1 Pub. 22 - 39/46

Authors : Maslov, V. P.

Title : New forms of Tertiary period seaweeds

Periodical : Dok. AN SSSR 103/1, 145-148, Jul 1, 1955

Abstract : Paleontological data are given on the new form of Tertiary period seaweeds discovered in southern USSR. One USSR references (1950). Drawings.

Institution :

Presented by: Academician N. M. Strakhov, March 29, 1955

MASLOW, V.P.

Round carbonate enigmas (oolites, "onkolites," coprolites, coagula,
and other similar microformations). Trudy Inst.geol.nauk no.155:
156-164 '55. (MLRA 8:10)

(Rocks, Sedimentary)

MASLOV, V.P.

✓ Maslov, V. P. Iskopaemye izvestkovye vodoroal
S.S.S.R. (Fossil Calcareous Algae of U.S.S.R.). Moscow:
Izdatel. Akad. Nauk S.S.S.R., 1956, 501 pp: r. 22, k.
40.

MASLOV, V.P.

Intervals in sedimentary deposits in Cambrian and Silurian variegated series of the southern Siverian Platform. Izv.AN SSSR. Ser.geol. 21 no.6:31-46 Je '56. (MIRA 9:10)

1. Geologicheskii insitut Akademii nauk SSSR, Moskva.
(Siberian Platform--Geology, Stratigraphic)

MASLOV, V.P.
USSR/ Geology - Paleontology
Card 1/1 Pub. 22 - 33/43
Authors : Maslov, V. P., and Kulik, Ye. L.
Title : New kind of seaweed (Bereselleae) from the carbon of the USSR
Periodical : Dok. AN SSSR 106/1, 126-129, Jan 1, 1956
Abstract : Geological-paleontological data are presented on a new type of Bereselleae seaweeds presumably originated during the Carboniferous period of the USSR. Four references: 3 USSR and 1 Germ. (1893-1951). Drawings.
Institution :
Presented by: Academician N. M. Strakhov, July 20, 1955

MASIOV, V.P.

On a new fossil family of Red Algae and two new genera of Blue-green Algae from the Carboniferous. Dokl.AN SSSR 107 no.1:151-154
Mr '56. (MLRA 9:7)

1. Institut geologicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom N.M.Strakhovym.
(Algae, Fossil)

MASLOV, V.P.

New Devonian red algae from the Kuznetsk Basin and the evolution of Corallinaceae. Dokl. AN SSSR 110 no.2:280-283 S '56. (MLRA 9:12)

1. Geologicheskii institut Akademii nauk SSSR. Predstavleno akademikom N.M. Strakhovym.
(Kuznetsk Basin--Algae, Fossil)

AUTHOR
TITLE

MASLOV, V.P.,

PA - 3177

A Contribution to the Problem of Classification and Phylogenesis
of Charophytes.

(K voprosu o klassifikatsii i filogenii kharofitov - Russian)

PERIODICAL

Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 3, pp 678-680.

(U.S.S.R.)

Received 6/1957

Reviewed 7/1957

ABSTRACT

A survey of the charophytes still existing and those which are extinct is given. From this we see what an important part the fossils of this type have played and how few groups of them are still extant. A hypothesis on the connection of the great groups of charophytes in the past is given. In the Cambrium or in the Ordovician there were two orders: the Sycidiales and the Trochilales. Another group branched off from the sycidiales in the Devon which represents a transition to the charales and is possibly related to the Atepecharaceae. This latter group maintained its existence as a fossil of this transition group to the real Charophytes which is unknown to us. The development of the Charales began in the Paleozoic age and reached its climax in the Mesozoic and Cretaceous ages. Another period of the Charophytes began with the Perm and reached its climax in the Tertiary. A number of kinds became extinct at the end of the Tertiary. (With 1 illustration)

Card 1/2

A Contribution to the Problem of Classification and Phylogenesis
of Chroophytes. PA 3177

ASSOCIATION Institute for Geology of the Academy of Science of the USSR
PRESENTED BY STRAKHOV, N.M., Member of the Academy. 19.10.1956.
SUBMITTED 21.3.1956.
AVAILBLE Library of Congress.
Card 2/2

20-2-51/66

AUTHOR: Maslov, V. P.

TITLE: A New Reproductive Organ of a Devonian Plant
(Novyy organ razmnozheniya devonskogo rasteniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 3, pp. 411-412
(USSR)

ABSTRACT: Since spores of highly organized plants were found in the Lower Paleozoicum it has become probable that there exist terrestrial plants which are more highly organized than the Psilophytes are in the Devonian and earlier. Some authors draw the conclusion that terrestrial woods existed already in the pre-Cambrian period. Without taking a stand on this conclusion, the paper under review discusses a sample found in Devonian calcareous rocks from the Russian plate (Starobin, Bobruysk Oblast, Belorussian SSR, depth 743-738 m). The stone consisted of carbonate shallow-water rock with admixture of clay and rests of Algae. In one of the polished longitudinal sections a formation has been found which may be considered as a propagation organ of a plant (figures

Card 1/3

20-2-51/60

A New Reproductive Organ of a Devonian Plant

Nr 1 - 3 of the paper under review). The organic remainder is a clear yellowish carbonated envelope of cigar shape, tapering towards the top and blunt at the base. On the top there is a dense fringe of bristles with preserved cellular structure. At both ends of the bag there are pores which are linking its interior cavity with the surrounding medium. The central part of the inner surface has round protuberances. The length of the entire bag amounts to 3.5 mm. The author of the present paper suggests for the above structure the name Hirsutocarpon extensum gen. et spec. nov.. The exterior shape of the bag resembles the megasporophyll genus Lepidocarpon from the Carboniferous of England, but differs in its inner structure and also in its having bristles. Bristles and a similar shape of the external envelope are known to occur in Miadesmia membranacea C. Bertrand, again from the Carboniferous of England. The difference lies in the inner structure of, and in the presence of several envelopes in the English form. Both of the above species belong to the class of Lycopodiales, group of Lepidospermae. As the author of the paper under review is not in a position to identify this generative organ with the vegetative parts of any fossil plant species described before, he places it presumptively with the

Card 2/3

A New Reproductive Organ of a Devonian Plant

Lycopodiaceae. It remains unclear whether the round or cylindrical berances in the interior are separate spores or spores which, after having matured, opened towards the exterior. If this assumption is correct, we must consider the structure as a sporangiophore and not as a megasporangium. The structure described above is sufficiently complicated in order to be considered as a more highly organized plant than the Devonian Psilophytes. There are 3 figures, and 2 references.

ASSOCIATION: Geological Institute AS USSR (Geologicheskii Institut Akademii nauk SSSR)

PRESENTED: February 19, 1957, by N. M. Strashov, Member of the Academy

SUBMITTED: February 8, 1957

AVAILABLE: Library of Congress

Card 3/3

MASLOV, V. P., (Candidate of Geological and Mineralogical Sciences)

"Calcareous Fossil Algae of the USSR"

For this work author received award by the Academy of Sciences of the USSR, Izv. Priroda, No. 2, 1959. pp. 113-114.

AUTHORS: Maslov, V.N., Utrobin, V.N.

SOV/11-68-12-2/16

TITLE: The Expansion of Red Algae of the Tertiary Period on the Territory of the Ukrainian SSR, and Their Correlation with Sea Transgressions (Rasprostraneniye tretichnykh bagryanykh vodorosley Ukrainskoy SSR i svyaz' ikh s transgressiyami morya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1968, Nr 12, pp 73-93 (USSR)

ABSTRACT: The article gives an exhaustive geological survey of different parts of the Ukrainian SSR where the Tertiary calcareous red algae (Rhodophyceae) has been found. This survey showed that at the Tortonian (Upper Miocene) stage a shallow sea covered the plateau parts of the Ukraine, and the expansion of the red algae corresponded to definite stages of the development of these sea basins. The following Soviet geologists are mentioned by the author: V.G. Morozova, A.S. Moyseyev, V.N. Utrobin, L.V. Linetskaya, L.B. Bashkirov, O.S. Vyalov, B.P. Zhizhchenko, V.P. Kozakova, M.Ya. Serova, L.N. Kudrina, V.F. Livental', A.A. Rogdanova, V.V. Glushko, L.S. Fishvanova, G.I. Molyavko, D.P. Naydin and V.P. Maslov.

Card 1/2

SOV/11-58-12-7/16

The Expansion of Red Algae of the Tertiary Period on the Territory of the Ukrainian SSR, and Their Correlation with Sea Transgressions

There are 7 maps, 2 profiles, 1 scheme, 1 table and 29 references, 18 of which are Soviet, 9 Polish and 2 Austrian.

ASSOCIATION: Geologicheskii institut AN SSSR, Moskva (The Geological Institute of the AS USSR, Moscow)
Lvovskaya ekspeditsiya Ukrneftegazrazvedki (The Lvov Expedition of the Ukrneftegazrazvedka)

SUBMITTED: August 21, 1957

Card 2/2

AUTHOR:

Maslov, V. P.

SOV/20-121-2-43/53

TITLE:

New Finds of Algae in the Jurassic Formation of the Crimea
(Novyye nakhodki vodorosley v yure Kryma)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 2, pp. 354-357
(USSR)

ABSTRACT:

Since the collection of the soleropores and linoporelles in the Jurassic limestone of the Krym-Yayla (Krymskaya Yayla) there have been no data on new types of algae in this area. Only recently V. F. Pchelintsev and N. P. Kyansep mentioned a farther spreading of the solenopores. The author found interesting Siphonea of the Upper Jurassic in the western Yayla. They belong to the type CHLOROPHYTA, class ISOCONTAE, order SIPHONALES, family Dasycladaceae, genus Actinoporella Alth., 1882. Act. (?) krymensis sp.nov. Figure 1 a - d, and 2 g. A description of this new type is given. Distribution: Karabi-Yayla. Genus Triplophorella Steinmann, 1880, Triploph. karabiensis sp.nov. Figure 1 ye and 2 ye, zh. Munieria Deecke, 1883. Mun. bacqica Deecke, 1883. Distribution: limestone in the Yayla. Furthermore Actinoporella sp. and Solenophora sp. which could not be determined to the genus, as well as rests of sev-

Card 1/2

SOV/20-121-2-47/53

New Finds of Algae in the Jurassic Formation of the Crimea

eral types of Coscinocoelus Leupold were found. The facial binding of Actinoporella krymensis and Munieria baconica seems to indicate polymorphous limestones from deeper water (not deeper than 50 m). Triplophorella karabiensis and Solenophora sp. were found in coarse detritus limestone, i.e. in a facies of the shallow water near to the reef or shore. There are 2 figures and 3 references, 0 of which are Soviet.

ASSOCIATION: Geologicheskii institut Akademii nauk SSSR (Geological Institute, AS USSR)

PRESENTED: March 4, 1958, by N. S. Shatskiy, Member, Academy of Sciences, USSR

SUBMITTED: February 28, 1958

Card 2/2

AUTHOR: Maslov, V P SOV/26-121-3-41/47

TITLE: A Found of the Genus Coscinoconus Leupold in the Jurassic of the Crimea and the Real Nature of This Genus (Nakhodka v Yure Kryma roda Coscinoconus Leupold i yego istinnaya priroda)

PERIODICAL: Doklady Akademii nauk SSSR, 1958. Vol. 121, Nr 3, pp. 545 - 548 (USSR)

ABSTRACT: In 1935 Leupold found the remnants of the organisms mentioned in the title in Switzerland and called them foraminifera (Ref 3). There was no definite decision on the position of this organism in the system (Refs 1,2,5-7) The author investigated Coscinoconus remnants found by L. G.Reznikova in the Kineridgian stage of the Crimea-Yayla (Krymskaya Yayla). The author succeeded in finding Leupold's opinion wrong as well as his methods of description. The author gives a new description of the genus which he classifies among the type Chlorophyta, class Isocontae, order Siphonales, family Dasycladaceae, Tribus Acetabularieae(?). In 1935 the author described the type Coscinoconus alpinus Leupold (Fig 1b) as organs of reproduction of the whorl-like, siphona-like algae. The vegetative parts remain unknown. 6 new Coscinoconus types were further described: C.fusiformis sp.nov.

Card 1/2

A Found of the Genus Coscinoconus Leupold in the
Jurassic of the Crimea and the Real Nature of This Genus

SOV/20-121-3-41/47

(Figs 1a,2a,3b) from Karabi-Yayla and Aypetri-Yayla (Aypetrinskaya yayla); C. conicus sp. nov. (Figs 2b,3d), Karabi-Yayla; Cheremoch- and Rybnitsa river, northern slope of the Carpathians (severnny sklon Karpat), material by L.V. Linetskaya; C. minutus sp. nov. (Fig 3a) from Ay-Petri; C. oblongus sp. nov. (Figs 2v,3v) from Ay-Petri; C. pagodaeformis (Figs 2g,3g) from Karabi-Yayla; C. asymmetricus sp. nov. from Karabi-Yayla. At the end of the paper the position in the system and the distribution of the mentioned types are discussed. There are 3 figures and 7 references, 1 of which is Soviet.

ASSOCIATION: Geologicheskii institut Akademii nauk SSSR (Institute of Geology, AS USSR)

PRESENTED: March 4, 1958, by N. S. Shatskiy, Member, Academy of Sciences, USSR

SUBMITTED: February 28, 1958
Card 2, 2

MASLOV, V.P.

Lime algae as indicators of factors governing the formation of
sediments. Sov.geol. 2 no.12:126-128 D '59. (MIRA 13:5)
(Algae, Fossil) (Geology, Stratigraphic)

3(5)

AUTHOR:

Maalov, V. P.

SOV/20-125-1-30, 61

TITLE:

Stromatoliths and Facies (Stromatolity i fatsii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1085-1088
(USSR)

ABSTRACT:

Stromatoliths are the only widely distributed organic forms of the Precambrian. Not until the last decade have several directional methods of description, nomenclature and classification stood out: 1) the paleontologic direction (Refs 1-3). Definite stromatolith genera, which are assigned to the Cyanophyceae, are described here. 2) "botanical" direction (Refs 4,5), in which the microstructures of the stromatoliths are considered as comparable with those of the recent Phaeophyceae and Cyanophyceae families, however, the exterior form remained unnoticed. 3) lithologicpaleontologic direction (Ref 6); the micro- and macrostructures are considered to be forms of complex origin. They are classified according to a special morphologic system, which deviates from the biologic system. The traces of algae and animals are discussed separately. 4) lithologic direction (Ref 7 and others). No special names are given to the stromatoliths or their

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Stromatoliths and Facies

SOV/20-125-5-36/61

structures. Their systematic is formed on the basis of the exterior form and the character of the stratification. Further treatment occurs in the present work according to standpoint 3. This multiplicity of conceptions goes back to the complex genesis of the stromatoliths. Various complexes of primitive algae took part in their formation, depending on the salt content of the water, the quantity of terrigenous material deposited, depth of the water, strength of water movement (currents and surf) and further, origins unexplained for the time being (eg. pH). Further, the presumed living conditions of the stromatoliths and the formation of onkoliths and ooliths are portrayed. The stromatoliths are more closely connected with the sedimentation than with the petrographic composition of the sediment. The familiar standpoint that the stromatoliths are involved in the life activity of primitive algae does not always explain the formation of some structures which occur in them. The experiments of V. O. Kalinerko (Ref 9) have shown that the bacterial factor of the carbonate deficiency may not be neglected. The bacterial colonies are able to change the acidity of the water locally. Thus, under favorable circumstances,

Card 2/4

Stromatoliths and Facies

SOV/20-125-5-36/61

microscopic spheres and grains are deposited within the colony. All of these methods of deposition, including carbonate sedimentation by algae, are closely related to the environmental conditions. The optimum conditions for the growth of the stromatoliths suggest the boundary between sea water and fresh water or the transformation of sea water into a brackish water lagoon along with the otherwise necessary conditions mentioned. All of the factors acting on the stromatoliths are closely connected with facies. The algae and bacteria could be replaced by others in the course of geological time. The sedimentation conditions were also changed. Perhaps the stromatoliths will be helpful in understanding these transformations. Thus the conclusion is drawn that the study of the stromatoliths as the result of sedimentation and as a guiding stratigraphic index is very complicated. There are 11 references, 6 of which are Soviet.

Card 3/4

Stromatoliths and Facies

S07/20-125-5-36/61

ASSOCIATION: Geologicheskii institut Akademii nauk SSSR (Geological
Institute of the Academy of Sciences, USSR)

PRESENTED: December 31, 1958, by N. S. Shatskiy, Academician

SUBMITTED: December 25, 1958

Card 4/4

MASLOV, Vladimir Petrovich; SHATSKIY, N.S., akademik, glavnyy red.;
VAKHRAMEYEV, V.A., otv.red.; ZELENOV, K.K., otv.red.;
II'INA, N.S., red.izd-va; KUZ'MIN, I.F., tekhn.red.

[Stromatolites; their genesis, method of study, relation with
facies, and geological significance, based on studies of
Ordovician deposits of the Siberian Platform] Stromatolity; ikh
genезis, metod izucheniya, svyaz' s faziymi i geologicheskoye
znachenie na primere ordovika Sibirskoy platformy. Moskva, Izd-
vo Akad. nauk SSSR, 1960. 186 p. (Akademiya nauk SSSR,
Geologicheskii institut. Trudy, no. 41) (MIRA 14:2)
(Siberian Platform—Stromatolites)

MASLOV, V.P.

Acicularia and their significance for the stratigraphy of the
U.S.S.R. Paleont. zhurn. no.3:115-122 '60. (MIRA 13:10)

1. Geologicheskii institut Akademii nauk SSSR.
(Algae, Fossil)

VYALOV, O.S. (SSSR); MASLOV, V.P. (SSSR); WDOIARZ, St. (Polska);
OLZWICZ, Z.R. (Polska); NOVAK, V. (Pol'sha); SLAVIN, V.I. (SSSR)
MASLAKOVA, N.I. (SSSR); VYALOV, O.S. (SSSR); EBERZIN, A.G. (SSSR)
BONDARCHUK, V.G. (SSSR)

Participation in discussions. Mat.Karp.-Balk.assots. no.3:157-
179 '60. (MIRA 14:12)

(Carpathian Mountains→Geology)

MASLOV, V.P.

Microscope object holder (system MD-1). *izv. AN SSSR. Ser. geol.* 25 no.9:113-115 S '60. (MIRA 13:9)

1. Geologicheskii institut AN SSSR, Moskva.
(Microscopy)

MASLOV, V. P.

Coprolites and traces of boring organisms and their significance
for lithologists. Izv. AN SSSR. Ser. geol. 25 no.10:81-86 0 '60.
(MIRA 13:10)

1. Geologicheskii institut AN SSSR, Moskva.
(Coprolite)

3 (5)

AUTHORS: Zhuk-Pochekutov, K. A., Maslov, V. P. SOV/20-130-1-40/69

TITLE: Problems Regarding Graphite From the Botogol'skiy Mountain
(East Sayan)

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 1, pp 140-142 (USSR)

ABSTRACT: Considerable deposits of high-quality graphite are known to occur in the alkaline Botogol'skiy massif . Graphite occurs almost in all rocks, but the bulk of large graphite bodies is concentrated in the northern part of the massif and is bound to leucocrate-nepheline-syenites and to alkaline and nepheline-pyroxene-syenites. Large individual granite bodies are bedded in limestones or in their contact areas. Graphite either is dispersed in rocks or forms little pockets and roundish or lens-shaped bodies of different size respectively. Larger deposits (bodies to 50 times 35 m in diameter) are ellipsoidal or roundish. Of this deposit, A. N. Labuntsov (Ref 1) classified the following graphite varieties: 1) massive, solid-crystalline, 2) arborescent, 3) drop-shaped ("somatoid") and concentric-spheroidal, and 4) imbricating graphite. The first variety is the most frequent one. The genesis of Botogol'skiy graphite has not been completely explained. The age of the Botogol'skaya

Card 1/4

Problems Regarding Graphite From the Botogol'skiy
Mountain (East Sayan)

SOV/20-130-1-40/69

intrusion is determined to be Lower or Middle Devonian. Most researchers agree that limestones are the source of carbon. Opinions, however, differ as to the formation conditions and the sedimentation age of graphite. According to B. M. Kupletskiy (Ref 2), besides organic remains of limestones, carbonic acid which was released during the CaCO_3 dissociation, also took part in the graphite development. Hydrocarbons were able to liberate carbon with CO_2 separated from the limestones during the interaction of gas-saturated magma. N. A. Florensov and V. S. Sobolev agree as to the source of carbon. However, they hold the opinion that graphite was developed by the CO decomposition (reaction of Boudoir) in the obligatory presence of bitumen. Graphite sedimentation set in already during the magmatic stage. Its bulk, however, was deposited by post-magmatic hydrothermal solutions. According to V. P. Solonenko the transformation process of limestones into syenite favored the carbon concentration. The hydrothermally deposited graphite is said to be of organic origin. Finally the authors

Card 2/4

Problems Regarding Graphite From the Botogol'skiy
Mountain (East Sayan)

SOV/20-130-1-40/69

describe a new tubelike variety of graphite from the Botogol'skiy massif (Fig 1). It forms groups of parallel tubes with an intermediate space of 1-2 mm, a length of 20 mm and walls 0.1-0.3 mm thick. The middle part of the tubes is filled by zoned minerals in the sequence: calcite, pyroxene, microcline, nepheline (from outside). Thick tubes dichotomize in a sharp angle. The authors arrived at the conclusion that in this case graphite was separated earlier than minerals of the syenite part. The latter are of metasomatic origin. Graphite tubes originally may have been composed of organic carbon compounds. In their embedding they remained hard and became graphite without considerable mechanical deformations. If this assumption is true, this problem is to have a name: Botogolia saianensis gen. et sp.n. These "Organisms" (as a working hypothesis) probably belong to algae of the species Phaeophyceae. Finally the authors are of the opinion that it is much simpler to explain the formation of graphite by this theory than by the assumption of a complicated carbon concentration by metasomatic processes. The authors also mention S. V. Obruchev. There are 1 figure and 4 Soviet

Card 3/4

Problems Regarding Graphite From the Botogol'skiy
Mountain (East Sayan)

SOV/20-130-1-40/69

references.

ASSOCIATION: Geologicheskii institut Akademii nauk SSSR (Institute of
Geology of the Academy of Sciences, USSR) ✓

PRESENTED: July 5, 1958, by N. S. Shatskiy, Academician

SUBMITTED: July 3, 1958

Card 4/4

MASLOV, V.P.

New Cretaceous algae from Kopet Dag (Turkmenistan). Dokl. AN
SSSR 134 no.4:939-941 0 '60. (MIRA 13:9)

1. Geologicheskii institut Akademii nauk SSSR. Predstavleno
akad. N.S.Shatskim.
(Kopet Dag--Algae, Fossil)

MASLOV, V.P.

Bioherms and algae as indicators of facies. Geol.sbor. [Lvov]
no.7/8:441-449 '61. (MIRA 14:12)

1. Geologicheskii institut AN SSSR, Moskva.
(Reefs)
(Petroleum geology) (Algae, Fossil)

MASLOV, V.P.

Algae and carbonate sedimentation. Izv. AN SSSR Ser. geol.
26 no. 12: 81-86 D '61. (MIRA 14:12)

1. Geologicheskiiy institut AN SSSR, Moskva.
(Algae)

MASLOV, V.P.

Are Sycidium and Chovanella the utricles of Charophyta? Dokl. AN SSSR
138 no.3:677-680 My '61. (MIRA 14:5)

1. Paleontologicheskij institut AN SSSR. Predstavleno akademikom
N.S. Shatskim.

(Algae, Fossil)

MASLOV, Vladimir Petrovich; BOLKHOVITINA, N.A., otv.red.; VERSTAK, G.V.,
red.izd-va; GUS'KOVA, O.M., tekhn.red.

[Fossil red alga in the U.S.S.R. and their association with
facies] Iskopaemye bagrianye vodorosli SSSR i ikh sviaz's fatsiami.
Moskva, Izd-vo Akad.nauk SSSR, 1962. 221 p. 36 plates.
(Akademia nauk SSSR. Geologicheskii institut. Trudy, no.53).
(MIRA 15:7)

(Rhodophyceae, Fossil)

MASLOV, V. P.

Concerning E. V. Romanova's article "Neogene Chara species from eastern Kazakhstan." Paleont. zhur. no. 3:174 '62.
(MIRA 15:10)

1. Geologicheskii institut AN SSSR.

(Kazakhstan—Algae, Fossil) (Romanova, E. V.)

KRIVIN, A.L. [deceased]; MASLOV, V.P.

New data on algae and the stratigraphy of the Upper Cretaceous
and Lower Paleocene of the Marmarosh Massif. Izv. AN SSSR.
Ser.geol. 27 no.12:61-71 D '62. (MIRA 16:2)

1. Geologicheskii institut AN SSSR, Institut geologii
poleznykh iskopayemykh AN UkrSSR.
(Transcarpatia--Geology, Stratigraphic)
(Transcarpathia--Algae, Fossil)

MASJOV, V.P.

Paleogene stromatolites of the Gissar Range. Dokl. AN SSSR 142
no.3:690-691 Ja '62. (MIRA 15:1)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom N.M.
Strakhovym.

(Gissar Range--Stromatolites)

FAINSHTEYN, E.G.; MASLOV, V.P.; KORNILOV, G.I.

Remote control of surface substations at the S.M. Kirov Mine.
Sbor. nauch. trud, KGRI no.19:30-35 '62. (MIRA 16:5)

(Krivoy Rog Basin--Electric substations) (Remote control)

FAYNSHTAYN, E.G.; KORNILOV, G.I.; MASLOV, V.P.

Apparatus for remote control of block-type fans in the S. M. Kirov
Mins. Sbor. nauch. trud. KGBI no.19:35-38 '62. (MIRA 16:5)

(Krivoy Rog Basin--Fans, Electric)

(Remote control)

MASLOV, V.P.

Remote control of the operation of automatic shuttle belt conveyors.
Sbor. nauch. trud. KGRI no.19:105-108 '62. (MIRA 16:5)

(Conveying machinery)

(Remote control)

MASLOV, Vladimir Petrovich; GOLLERBAKH, M.M., *otv. red.*; VAKHRAMEYEV, V. A., *otv. red.*; PEYVE, A.V., *glavnyy red.*; MARKOV, M.S., *red.*; MENNER, V.V., *red.*; TIMOFEYEV, P.P., *red.*; VANYUKOVA, O.M., *red. izd-va*; CUS'KOVA, O.M., *tekhn. red.*

[Introduction to the study of fossil charophytes.] *Vvednie v izuchenie iskopaemykh kharovykh voderoslei.* Moskva, *Izd-vo Akad. nauk SSSR*, 1963. 103 p. (*Akademiia nauk SSSR. Geologicheskii institut. Trudy*, no. 82). (MIRA 16:11)

1. *Chlen-korrespondent AN SSSR (for Peyve).*

MASLOV, V.P.

Articulate red algae of the genus *Jania* from Middle Sarmatian bioherms in
Moldavia. Paleont.zhur. no.1:111-122 '63. (MIRA 16:4)

1. Geologicheskii institut AN SSSR.
(Moldavia--Algae, Fossil)

MASLOV, V.P.

Find of a lime corolla and the structure of the apical part of
the fruit-bearing organs in fossil Charophyta. Dokl. AN SSSR 149
no.4:954-956 Ap '63. (MIRA 16:3)

1. Geologicheskiy institut AN SSSR. Predstavleno akademikom
N.M.Strakhovym.

(Algae, Fossil)

MASLOV, V.P.

Germination of the oospore in fossil charophytes, and a new
form genus. Dokl. AN SSSR 152 no.2:443-445 S '63.

(MIRA 16:11)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom
N.M. Strakhovym.

MASLOV, V.P.; RENGARTEN, N.V.

Find of fossil calcareous algae in loess. Dokl. AN SSSR 159
no.3:579-581 N '64 (MIRA 18:1)

1. Geologicheskii Institut AN SSSR. Predstavleno akademikom
N.M. Strakhovym.

MASLOV, V.P.

Kopetdagaria, a new tribe of verticillate Siphoneae (green algae).
Dokl. AN SSSR 164 no.5:1154-1157 0 '65.

1. Geologicheskii institut AN SSSR. Submitted December 8, 1964. (MIRA 18:10)

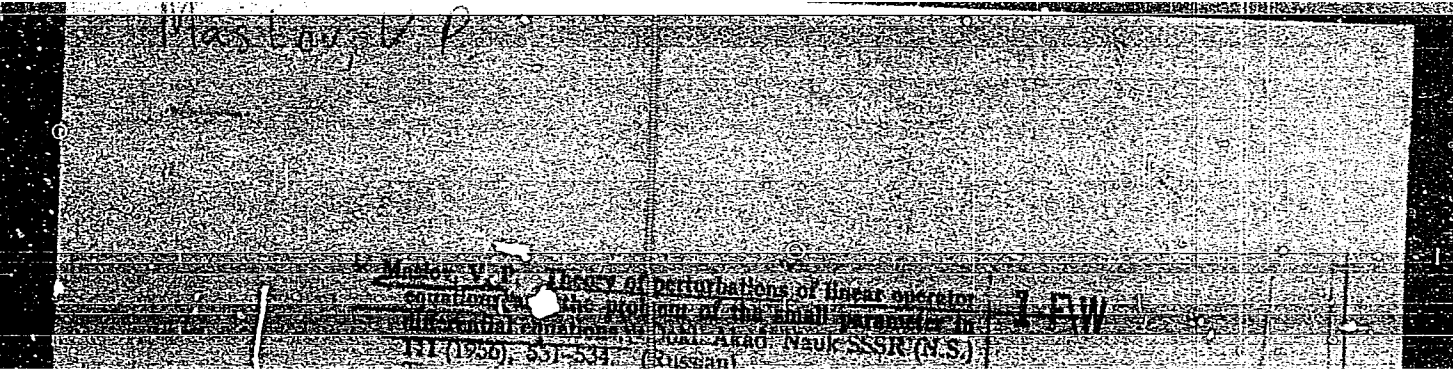
Maslov, V.P.

USSR/Theoretical Physics

B-4

Abs Jour : Referat Zhur - Fizika, No 5, 1957, No 10863
Author : Maslov, V.P.
Inst : 0
Title : Correction to the Quasi-Classical Energy Approximation.
Orig Pub : Tr. 3-go Vses. matem. s"ezda. 2. M., AN SSSR, 1956, 164
Abstract : No abstract.

Card 1/1



The author states without proof several theorems about sequences T_n , the f_n belonging to a separable Hilbert space, the T_n (unbounded) operators on H and f_n converging (strongly or uniformly) to T and f respectively. The author deduces also without proof theorems about the behavior of solutions to non-homogeneous linear differential equations under certain small perturbations of the coefficients and right-hand side. For example, Theorem 2. Consider for each

$\epsilon > 0$ the ordinary equation

$$\epsilon y^{(n)} + a_{n-1} y^{(n-1)} + \dots + a_1 y' + a_0 y = f,$$

with zero boundary conditions

$$y(x_0) = y'(x_0) = \dots = y^{(n-1)}(x_0) = 0$$

Maslov, V. P.

Let a_m be m -times differentiable, and independent of x ;
let $a_{n-1} = a_{n-2} = \dots = a_{k+1} = 0$, but $a_k \neq 0$, with $n - k$ odd.
Let the right-hand sides f_n converge in $L^2(x_0, x_1)$ and let
the set of squares of solutions y_n be bounded in L^2 . Then
the y_n converge in L^2 to the solution of the formal limit

C. F. W.
6

any set of solutions of equations (1) bounded in L^2 , then
 the φ_k converge in L^2 to the solution of the formal limit
 equation with zero boundary conditions. Theorem 3. Let
 the elliptic equation $\Delta u + c(x_1, \dots, x_n)u = F(x_1, \dots, x_n)$
 have the solution u_0 vanishing on the (smooth) boundary
 Γ of the domain Ω of \mathbb{R}^n . Define $\varphi_k = F/\epsilon^2$, suppose
 all functions in sign belong to $L^2(\Omega)$, and suppose u_0
 bounded on Γ . Then u_k converges to u_0 in the $L^2(\Omega)$.
 These theorems extend and simplify some of the work of
 A. N. Tikhonov and V. M. Volosov. H. Mitil.

6
 2/5/54
 SR

MASLOV, V. P. Cand Phys-Math Sci -- (diss) "Certain problems of the theory of disturbances." Mos, 1957. 4pp 22 cm. (Mos State Univ im M. V. Lomonosov), 110 copies. (KL, 15-57, 104)

197 AND 198 ORDERS 197 AND 198 ORDERS

PROCESSING AND PROPERTY INDEX

24

MAKLOV, V. P.

CA

The action of gas explosion on solid explosives. K. K. Andreyev and V. P. Maslov. *Compt. rend. acad. sci. U. R. S. S.* 29: 195-7(1939) (in English).—Two series of expts. were carried out (one at atm. and lower pressures and the other at high pressures) to ascertain the action of gas explosions on solid explosives and to prove the hypothesis set forth in (C. A. 29, 4989). In the first series a glass tube, 25 mm. in diam. and 1.5 m. long, was filled with a H-O mixt. after evacuation, and a small amt. of explosive (as a solidified drop or a large crystal) was placed on a piece of Fe in the center of the tube. The H-O mixt. was detonated (by firing a 15 mg. charge of Pb azide placed in a side arm) and the explosion photographed. Picric acid (I), tetryl (II) and penta-erythritol-tetranitrate (III) were tested. None of these explosives either exploded or burned when the gaseous mixt. had an initial pressure of 1 atm., or when II and III were heated up to 100°. The Pb azide as a "passive" explosive was found to work well for gas pressures of 760, 400 and 210 mm. In the 2nd series, an electrolytic gas mixt. was introduced into an evacuated steel tube (38 mm. bore and 1 m. long) and exploded by Pb azide as before. Expts. were carried out with I, III and blasting gelatin (IV). At atm. pressure IV did not burn or explode; at 5 and 10 atms. it burned without forming the tube; while at still higher pressures it exploded and the tube was blown to pieces. III (cast) was found not to burn or explode at 5 or 10 atms.; at 15 atms. it ignited, and exploded at 20 atms.; while III (powd.) exploded at 10 and 15 atms. I was found to burn at 20 and 24 atms. and explode at 30 atms. The authors maintain that the results obtained support the deductions made from their calcns. and theory. Frank Conet

ASM-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

197 AND 198 ORDERS

197 AND 198 ORDERS

USSR

Maslov, V. P. On the limit behavior of certain quantum-mechanical quantities. Dokl. Akad. Nauk SSSR (N.S.) 94: 623-626 (1954). (Russian)

(57)
90

The equation $h^2 y'' + (\lambda - u(x))y = 0$ ($2m+1$) is considered with $u(\pm\infty) = u(-\infty) = \infty$ and $u(x)$ having a finite number of maxima and minima. Let λ_n^j be an eigenvalue and $y_n(x)$ a normalized eigenfunction on $(-\infty, \infty)$. Let x_1, \dots, x_n be roots of $\lambda_n^j - u(x) = 0$. Then λ_n^j satisfies one of the equations

$$h^{-1} \int_{-x_j}^{x_{j+1}} (\lambda_n^j - u(x))^{1/2} dx = \pi(n + \frac{1}{2}) + O(h)$$

for $n = 1, 2, \dots$ and $j = 1, \dots, 2n$. If the integer i is chosen so that the above equation with $j = i$ is satisfied for small h

for $n=1, 2, \dots$ and $j=1, \dots, 2k$. If the integer i is chosen so that the above equation with $j=i$ is satisfied for small h then $y_n(x)$ corresponding to λ_n tends to zero exponentially fast on the interval $x_{2i-1}-a \leq x \leq x_{2i}+2$ as $h \rightarrow 0$, where a is small but not dependent on h . Other results are given.

N. Levinson (Cambridge, Mass.)

RDW
1952

SUBJECT USSR/MATHEMATICS/Functional analysis CARD 1/2 PG 17:
 AUTHOR MASLOV V.P.
 TITLE Perturbation theory at the transition from a discrete spectrum
 to a continuous one.
 PERIODICAL Doklady Akad. Nauk 109, 267-270 (1956)
 reviewed 11/1956

The author generalizes his earlier results (Doklady Akad. Nauk 94, 11 (1954)) on the approximations for the one-dimensional Schrödinger equation to the more-dimensional case. He establishes that for $\hbar \rightarrow 0$ the eigenfunctions of a more-dimensional Hamilton operator in a certain sense converge to the combinations of more-dimensional δ -functions. This result holds for an arbitrary quantum mechanical operator which corresponds to a physical magnitude which can be measured. If in the three-dimensional case there exists a function R_n such that with respect to the norm

$$-\frac{\hbar}{2m} \Delta R_n + \frac{1}{\hbar} u(x, y, z) R_n - \frac{1}{\hbar} \mu_n(\hbar) R_n \rightarrow 0$$

for $\hbar \rightarrow 0$ and $\mu_n(\hbar) \rightarrow \lambda$, then R_n is the asymptotic of the eigenfunction of the Hamilton operator. The function $\mu_n(\hbar)$ gives the asymptotic of the eigenvalues for $\hbar \rightarrow 0$ in the three-dimensional case of the Schrödinger equation if the potential function possesses a minimum. Here the distance of neighbored

Doklady Akad. Nauk 109, 267-270 ('956)

CARD 2/2

PG - 374

. points of the spectrum has the order \bar{n} for $M_n(\bar{n}) \rightarrow \lambda$.

$n \rightarrow \infty$

$\bar{n} \rightarrow 0$

INSTITUTION: Lomonossow University, Moscow.

MASLOV, V.P.

Theory of perturbations of linear operator equations and the
problem of the small parameter in differential equations.
Dokl. AN SSSR 111 no.3:531-534 N '56. (MLRA 10:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
Predstavleno akademikom N.N. Bogolyubovym.
(Differential equations) (Functional analysis)

CARD 1 / 2

PA - 1997

SUBJECT
AUTHOR
TITLEUSSR / PHYSICS
MASLOV, V.P.

PERIODICAL

A Method Based on the Perturbation Theory for the Determination of the Spectrum of Ordinary Differential Operators with Small Parameters for the Oldest Derivative.
Dokl.Akad.Nauk 111, fasc.5, 977-980 (1956)
Issued: 1 / 1957

Let $\{A_k\}$ be assumed to be a series of self-adjointed operators with discrete spectrum which converges considerably in the direction of the self-adjointed operator with a continuous spectrum. If $\psi_k^{(1)}$ and $E_k^{(1)}$ denote the asymptotic behavior of the eigenfunctions and eigenvalues of the operators A_k in the case of large k , the first correction of the asymptotic behavior of eigenvalues can be expressed in the following manner, which is similar to that adopted in the case of the ordinary perturbation theory:

$((\psi_k^{(1)}, A_k \psi_k^{(1)}) / (\psi_k^{(1)}, \psi_k^{(1)})) - E_k^{(1)}$. This naturally holds only if $\psi_k^{(1)}$ belongs to the definition domain of A_k and if $\psi_k^{(1)}$ (i.e. the eigenvalue in first approximation) is not degenerated. For the purpose of determining the following approximations it is necessary in each concrete case to make use of one or the other modification of the perturbation theory. The method discussed below is suited for the purpose of solving boundary value problems in the case of ordinary

Dokl.Akad.Nauk 111, fasc.5, 977-980 (1956) CARD 2 / 2

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linear differential equations with small parameter in the case of the "oldest" (?) derivative. The author explains this method on the basis of the SCHROEDINGER

equation: $-(\hbar^2/2\mu)(d^2/dx^2) \Psi_n + \{u(x) - E_n\} \Psi_n = 0$ with the condition

$\int_{-\infty}^{\infty} \Psi_n^2(x) dx < \infty$. Here $\hbar^2/2$ is considered to be a small parameter, and

the HAMILTONIAN operator $H = (\hbar^2/2\mu)(d^2/dx^2) + u(x)$ at $\hbar \rightarrow 0$ on this occasion converges considerably towards the multiplication operator $u(x)$. H.A.KRAMERS, Zs.f.Phys., 39, 828 (1926) found the first so-called quasiclassical approximation for the aforementioned SCHROEDINGER equation, and the following approximations are discussed in the course of this article. In this connection $u(x) - E$ is assumed to have two simple roots. The first approximation of the eigenvalues of the SCHROEDINGER equation investigated here is found with the aid of a BOHR equation. For the determination of the following approximations a recurrence formula is set up which connects the (i+1)-th formula with the i-th approximation. On the basis of the asymptotic behavior of the BESSEL functions it is possible to write down the second approximation for the eigenfunctions of the problem under investigation. In conclusion, the determination of the asymptotic behavior of the eigenfunctions is described.

INSTITUTION: Moscow State University.

MASLOV, V.P.

Limit change of quantum mechanics to classical. Vest. Mosk. un.
Ser. mat., mekh., astron. fiz., khim. 12 no. 6:107-116 '57.

(MIRA 11:10)

1. Kafedra matematiki dlia fizicheskogo fakul'teta Moskovskogo
gosudarstvennogo universiteta.

(Quantum theory)
(Mechanics)

MASLOV, V.P.

AUTHOR

MASLOV, V.P.

20-5-11/60

TITLE

Degeneration on Passing from a Discrete Spectrum to a Continuous and Transition from Quantum Mechanics to Classical Mechanics.

(Vyrozhdeniye pri perekhode ot diskretnogo spektra k neprekynnomu i perekhod iz kvantovoy mekhaniki v klassicheskuyu. - Russian)

PERIODICAL

Doklady Akademii Nauk SSSR 1957, Vol 114, Nr 5, pp 957-960 (USSR)

ABSTRACT

$\{e_i^k\}$ here denotes the system ($k = 1, 2, \dots$) of the orthonormal bases in a certain HILBERT'S space H ; $\{n_k\}$ - a certain sequence of whole numbers depending on k . Further

$\lim_{k \rightarrow \infty} n_k = \infty$ is true. Furthermore, the index $m \{n_k\}$ is

eliminated here. First, the conceptions "element of the space $M_n \circ [e_i^k]^n$ " and "element of the space $M_n [e_i^k]$ " are defined. Also the elements equivalent to zero are defined. In $M_n [e_i^k]$ a scalar product is defined. The space

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$M_n [e_i^k]$ is a separable HILBERT space. If at $k \rightarrow \infty$ the

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Degeneration on Passing from a Discrete Spectrum to a Continuous and Transition from Quantum Mechanics to Classical Mechanics.

difference $(n-n') \rightarrow \infty$ then the spaces $M_n [e_i^k]$ and $M_n [e_i^k]$ are orthogonal in the sense of the scalar product

$$\lim_{k \rightarrow \infty} (x_k, \bar{x}_k), x_k \in M_n [e_i^k], \bar{x}_k \in M_n [e_i^k]$$

Now $\{A_k\}$ is assumed to denote a sequence of selfadjointed positive definite operators with a discrete spectrum with the eigenfunctions $\{x_i^k\}$ and with the eigenvalues $\{\lambda_i^k\}$

These operators strongly converge towards the selfadjoining operator A with a continuous spectrum. λ is assumed to denote a point of the spectrum of the operator A; the space $M_n \{A_k\}$ is denoted by $M_n [x_i^k]$ The following theorem applies: The conclusion of the operator $\{A_k\}$ in $M_n \{A_k\}$ is the operator of the multiplications with the number λ .
(No Illustrations)

ASSOCIATION: Moscow State University "M.V. LOMONOSOV"
PRESENTED BY: N.N. BOGOLYUBOV, member of the Academy on 31.10.1956
SUBMITTED: 17.10.1956
AVAILABLE: Library of Congress.
CARD 2/2

NASLOV, V.P.

~~Mathematical~~ basis for the passage from the quantum to the
classical limit. Nauch.dokl.vys.skoly; fiz.-mat.nauki
no.1:63-67 '58. (MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Quantum theory) (Mechanics)

AUTHORS: Maslov, V.P., Samarskiy, A.A., Fomin, S.V., SOV/42-13-6-31/33
and Shirokov, Yu.M.

TITLE: I.I.Gol'dman and V.D.Krivchenkov, Collection of Problems for
Quantum Mechanics, Moscow, Gostekhizdat, 1957, 275 Pages,
15000 Copies, 5 Rub. 15 Kop. (I.I.Gol'dman i V.D.Krivchenkov,
Sbornik zadach po kvantovoy mekhanike, M., Gostekhizdat, 1957,
str. 275, tirazh 15000 ekz., tsena 5 r. 15 kop)

PERIODICAL: Uspekhi matematicheskikh nauk, 1958, Vol 13, Nr 6, pp 234-237 (USSR)

ABSTRACT: This is a very appreciating review of the above book. For
the further editions it is commended to consider the group-
theoretical methods of quantum mechanics and to give
instructions for some difficult problems.

Card 1/1

24(3), 9(9)

SOV/20-123-4-14/53

AUTHOR:

Maslov, V. P.

TITLE:

The Asymptotic Behavior of the Eigenfunctions of the Equation $\Delta u + k^2 u = 0$ With Boundary Conditions Along Equidistant Curves and the Scattering of Electromagnetic Waves in a Wave Guide
(Asimptotika sobstvennykh funktsiy uravneniya $\Delta u + k^2 u = 0$ s krayevymi usloviyami na ekvidistantnykh krivykh i rasseyaniye elektromagnitnykh voln v volnovode)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 631-633
(USSR)

ABSTRACT:

The author investigates the equation $\Delta \psi_k + k^2 \psi_k = 0$ in a certain domain which is bounded as follows: a) either by 2 closed equidistant curves, or b) by 2 equidistant curves and 2 verticals to these curves, or c) by 2 equidistant curves extending towards infinity. $\psi_k|_{\Gamma}$ is assumed. In the two first cases the spectrum will be concrete, but in the third case it will be continuous. The arc length s of the inner equidistant curve and the length r of the corresponding normal are introduced as a new system of coordinates. An equation for $\psi_k(r, s)$ resulting under these conditions is

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