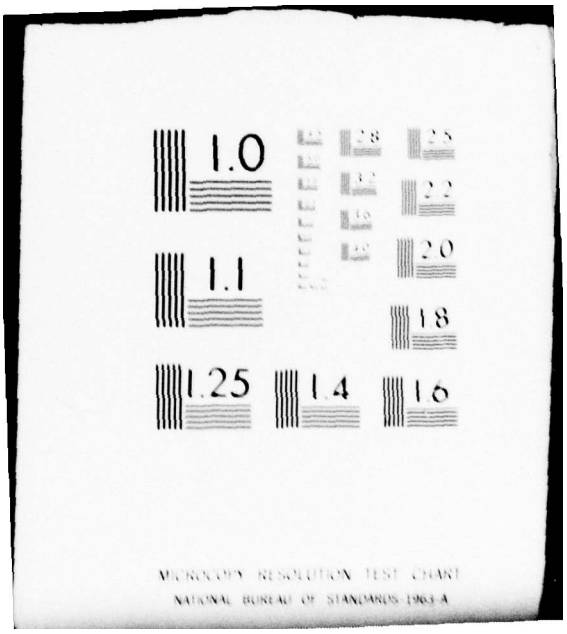
AD-A070 761 DEFENSE INTELLIGENCE AGENCY WASHINGTON DC F/G 20/5
BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS. NUMBER 35. MAY - JUN--ETC(U)
APR 79

UNCLASSIFIED DIA-DST-1740Z-003-79 NL

1 OF 2
AD A070761


1.0
1.1
1.25
1.4
1.6
2.0
2.2
2.5
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

LEVEL II

DST-1740Z-003-79

AD A070761

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS (U)

MAY-JUNE 1978

APRIL 1979

(14) DIA-DST-1740Z-0003-79

(6) BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS.

Number ~~No.~~ 35.

MAY - JUNE 1978

(11) Apr 79

Date of Report

March 15, 1979

(12) 97 p.

Vice Director for Production
Defense Intelligence Agency

This document was prepared for the Defense Intelligence Agency under an intragovernment agreement. It is intended to facilitate access of government researchers to Soviet laser literature.

Comments should be addressed to the Defense Intelligence Agency, Directorate for Scientific and Technical Intelligence, ATTN: DT-1A.

Approved for public release; distribution unlimited

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, No. 35 MAY - JUNE 1978		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Intelligence Agency Directorate for Scientific and Technical Intelligence, ATTN: DT-1A		12. REPORT DATE March 15, 1979 13. NUMBER OF PAGES 90
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. Distribution Statement (of the abstract entered in Block 20, if different from report)

18. Supplementary Notes

19. KEY WORDS

Solid State Lasers, Liquid Lasers, Gas Lasers, Chemical Lasers, Laser Components, Nonlinear Optics, Spectroscopy of Laser Materials, Ultrashort Pulse Generation, Gamma Lasers, Laser Theory, Laser Communications, Laser Beam Propagation, Laser Computer Technology, Holography, Laser Chemical Effects, Laser Parameters, Laser Measurement Applications, Laser-Excited Optical Effects, Laser Beam-Target Interaction, Laser Plasma

20. ABSTRACT

This is the Soviet Laser Bibliography for May-June 1978 and is no. 35 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; beam-target interaction; and plasma generation and diagnostics.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1978, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are included, as well as entries from the CIRC data base not otherwise covered. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

SOVIET LASER BIBLIOGRAPHY, MAY - JUNE 1978

TABLE OF CONTENTS

I. BASIC RESEARCH

A. Solid State Lasers

1. Crystal: Rare-Earth Activated

a. Nd^{3+} 1
b. Er^{3+} 1

2. Crystal: Miscellaneous 1

3. Semiconductor: Simple Junction

a. GaAs 2
b. InSb 2

4. Semiconductor: Mixed Junction 2

5. Semiconductor: Heterojunction 3

6. Semiconductor: Theory 4

7. Nd: Glass 4

B. Liquid Lasers

1. Organic Dyes

a. Rhodamine 5
b. Polymethine 5
c. Miscellaneous Dyes 6

2. Theory 6

C. Gas Lasers

1. Simple Mixtures

a. He-Ne 6

2. Molecular Beam and Ion

a. CO_2 7
b. CO 11
c. Noble Gas 12
d. N_2 12
e. N_2O 12

f. Submillimeter 13
g. Metal Vapor 13
h. Gasdynamic 15

3. Excimer 16

4. Theory 16

D. Chemical Lasers

1. Photodissociative 17

E. Components

1. Resonators

a. Design and Performance 18
b. Mode Kinetics 18

2. Pump Sources 19

3. Deflectors 20

4. Diffraction Gratings 20

5. Filters 20

6. Mirrors 21

7. Detectors 21

8. Modulators 22

F. Nonlinear Optics

1. Frequency Conversion 24

2. Parametric Processes 25

3. Stimulated Scattering

a. Raman 25
b. Miscellaneous Scattering 26

4. Self-focusing 27

5. Acoustic Interaction 27

6. Birefringence 28

7. General Theory 29

G. Spectroscopy of Laser Materials 30

H. Ultrashort Pulse Generation 30

J. Theoretical Aspects of Advanced Lasers 31

K. General Laser Theory 31

II. LASER APPLICATIONS

A. Communications Systems 33

B. Beam Propagation

1. In the Atmosphere 35

2. In Liquids 36

3. Theory 36

C. Computer Technology 36

D. Holography 38

E. Laser-Induced Chemical Reactions 45

F. Measurement of Laser Parameters 46

G. Laser Measurement Applications

1. Direct Measurement by Laser 49

2. Laser-Excited Optical Effects 58

H. Beam-Target Interaction

1. Metal Targets 64

2. Dielectric Targets 65

3. Semiconductor Targets 66

4. Miscellaneous Studies 66

J. Plasma Generation and Diagnostics 67

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS 74

IV. SOURCE ABBREVIATIONS 76

V. AUTHOR AFFILIATIONS 80

VI. AUTHOR INDEX 83

I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Rare-Earth Activated

a. Nd^{3+}

1. Yezhkov, A.P., and A.A. Fomichev (118). Stable low-frequency pulsation of radiation from a YAG:Nd^{3+} laser with induced mode-locking. IN: Tr 1, 150-154. (RZhRadiot, 6/78, 6Ye58)

2. Zakgeym, A.L., Yu.M. Makushenko, V.M. Marakhonov, S.A. Nikishin, and R.P. Seysyan (0). Raising the radiation power of a YAG:Nd^{3+} laser with a semiconducting pumping system. ZhTF P, no. 12, 1978, 699-702.

b. Er^{3+}

3. Arsen'yev, P.A., Kh.S. Bagdasarov, and V.V. Fenin (19). Growing optical YAG films. Kristal, no. 3, 1978, 669-670.

4. Ashurov, M.Kh., T.T. Basiyev, Yu.K. Voron'ko, Ye.V. Zharikhov, V.I. Zhekov, T.M. Murina, V.V. Osiko, M.I. Timoshechkin, and I.A. Shcherbakov (1). Nonradiative losses at the $^{4}I_{11/2}$-$^{4}I_{13/2}$ transition in an Er^{3+} ion in $Y_3Al_5O_{12}$, $Y_3Ga_5O_{12}$, $Gd_3Ga_5O_{12}$, CaF_2 crystals. KE, no.5, 1978, 1028-1033.

2. Crystal: Miscellaneous

5. Bukin, G.V., S.Yu. Volkov, V.N. Matrosov, B.K. Sevast'yanov, and M.I. Timoshechkin (13, 205). Lasing in alexandrite ($BeAl_2O_4$:Cr^{3+}). KE, no. 5, 1978, 1168-1169.

6. Grassme, W., and U. Lorenz (NS). Mount for a liquid-cooled solid-state laser medium. Patent GDR, no. 126132, issued 22 June 1977. (RZhRadiot, 5/78, 5Ye260)

7. Rohlicek, F. (NS). Mount for a cylindrical rod of active material. Author's certificate Czechoslovakia, no. 168089, issued 15 March 1977. (RZhRadiot, 5/78, 5Ye261)

3. Semiconductor: Simple Junction

a. GaAs

8. Annenkov, V.I., Yu.M. Mironov, V.I. Molochev, and A.S. Semenov (1). Coherent radiation from single-frequency injection lasers. KE, no. 6, 1978, 1384-1386.

b. InSb

9. Myl'nikov, G.D., D.N. Sobolenko, and Yu.V. Shcheblykin (23). InSb laser with two-photon pumping by CO_2 laser radiation. DAN SSSR, v. 240, no. 6, 1978, 1336-1339.

4. Semiconductor: Mixed Junction

10. Brodin, M.S., N.I. Vitrikhovskiy, A.A. Kipen', S.G. Shevel', and N.I. Yanushevskiy (5,6). Spatial distribution and lasing modes in $Zn_xCd_{1-x}S$ single-crystal wafers under single-photon optical excitation. KE, no. 6, 1978, 1272-1278.

11. Brodin, M.S., N.I. Vitrikhovskiy, A.A. Kipen', S.G. Shevel', and N.I. Yanushevskiy (5,6). Spatial distribution and lasing modes of $CdS_{1-x}Se_x$ single-crystal wafers under single-photon optical excitation. UFZh, no. 5, 1978, 837-843.

5. Semiconductor: Heterojunction

12. Alferov, Zh.I., V.G. Agafonov, V.M. Andreyev, D.Z. Garbuzov, V.M. Lantratov, and V.D. Rumyantsev (4). Investigation of defect generation in the active domain of twin AlGaAs heterostructures at high optical excitation levels. FTP, no. 6, 1978, 1054-1059.

13. Alferov, Zh.I., V.M. Andreyev, D.Z. Garbuzov, N.Yu. Davidyuk, and V.P. Larionov (0). Converter heterostructures with heat elimination in YAG:Nd^{3+}-based solid state laser pumping systems. ZhTF, no. 5, 1978, 1040-1042.

14. Gurevich, S.A., Ye.L. Portnoy, and M.E. Raykh (4). Light absorption in film GaAs-$Al_xGa_{1-x}As$ waveguides and its influence on the threshold characteristics of heterolasers with Bragg mirrors. FTP, no. 6, 1978, 1160-1169.

15. Kolyshkin, V.I., and Ye.L. Portnoy (0). Features of the threshold characteristics of strip heterolasers in the Al-As-GaAs system with implantation of oxygen ions. ZhTF P, no. 11, 1978, 646-649.

16. Logginov, A.S., K.Ya. Senatorov, V.Ye. Solov'yev, V.I. Suetinov, and Yu.F. Fedorov (0). Modulating the radiation in band injection lasers by a controlled Gunn diode. ZhTF P, no. 24, 1977, 1326-1330. (RZhRadiot, 6/78, 6Ye62)

17. Mil'vidskiy, M.G., L.M. Morgulis, V.B. Osvenskiy, and G.T. Pak (95). Electron microscope investigation of defects in injection lasers. FTP, no. 6, 1978, 1190-1192.

18. Vavilov, V.S., O.N. Yermakov, V.P. Sushkov, and M.V. Chukichev (0). Stimulated emission in the yellow-green spectrum range($\lambda \geq 5530$ Å, T = 80 K) during electronic excitation of solid $In_{1-x}Ga_xP_{1-z}As_z$ solutions. ZhTF P, no. 9, 1978, 500-503.

19. Yelyukhin, V.A., S.Yu. Karpov, Ye.L. Portnoy, and D.N. Tret'yakov (0). Features of growing $Al_xGa_{1-x}As$ waveguide heterostructures with a smooth change in composition. ZhTF P, no. 11, 1978, 629-632.

6. Semiconductor: Theory

20. Bogdankevich, O.V., N.A. Borisov, B.A. Bryunetkin, S.A. Darznek, and F.V. Pevtsov (445). Varizonal structures in e-beam pumped semiconductor lasers. KE, no. 6, 1978, 1310-1317.

21. Karavayev, S.M., L.N. Kurbatov, and A.D. Britov (0). Some features of coherent optical emission in narrowband semiconductors. KE, no. 6, 1978, 1368-1370.

7. Nd: Glass

22. Ablekov, V.K., V.S. Belyayev, V.I. Vinogradov, V.G. Marchenko, V.M. Marchenko, and A.M. Prokhorov (0). Radiation field of a neodymium glass laser with a lattice mirror. OiS, v. 44, no. 6, 1978, 1208-1210.

23. Brodov, M.Ye., N.I. Gavrilov, P.I. Ivashkin, V.V. Korobkin, V.G. Nikolayevskiy, and R.V. Serov (1). Investigation of inversion in an amplifier module utilizing an active element with a rectangular cross section. KE, no. 5, 1978, 1072-1076.

24. Nikitin, V.I., M.S. Soskin, and A.I. Khizhnyak (5). Effect of uncorrelated, nonuniform band broadening in Nd^{3+} ions at 1.06 μ on lasing properties of neodymium glass. KE, no. 6, 1978, 1375-1379.

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

25. Smirnov, V.S., and V.I. Studenov (0). Influence of thermooptical cavity distortion on the energy characteristics of a rhodamine 6G laser with flashlamp pumping. OiS, v. 44, no. 6, 1978, 1136-1142.

b. Polymethine

26. Bonch-Bruyevich, A.M., Ye.N. Kaliteyevskaya, and T.K. Razumova (0). Superluminescence and stimulated emission of radiation by unstable photoisomers of polymethine dyes. KE, no. 5, 1978, 1113-1118.

c. Miscellaneous Dyes

27. Gondra, A.D., and N.A. Kozlov (0). Divergence of dye laser radiation. ZhPS, v. 28, no. 5, 1978, 796-803.

28. Gruzinskiy, V.V. (3). Active media for lasers using multiatomic organic molecules: general information on lasing efficiency. Institut fiziki AN BSSR. Preprint, no. 134, 1977, 55 p. (RZhF, 5/78, 5D910)

29. Gruzinskiy, V.V. Active media for lasers using multiatomic organic molecules: anthracene, coumarin, phthalimide, polymethine dyes. Institut fiziki AN BSSR. Preprint, no. 135, 1977, 57 p. (RZhF, 5/78, 5D911)

30. Kukhtarev, N.V. (5). A laser with distributed feedback using a cholesteric liquid crystal. KE, no. 6, 1978, 1360-1362.

31. Rubeko, L.M., I.V. Krasnov, N.A. Kozlov, L.K. Denisov, and B.M. Uzhinov (2). Lasing mechanism of sodium 8-hydroxypyrene-1,3,6-trisulfonate. DAN SSSR, v. 240, no. 5, 1978, 1157-1160.

32. Smol'skaya, T.I., and V.I. Tomin (0). Second All-Union conference on "Lasers using complex organic compounds and their application". ZhPS, v. 28, no. 5, 1978, 938-942.

33. Tomin, V.I., N.A. Nemkovich, and A.N. Rubinov (3). Using electrochemical reaction products in a dye laser active medium to broaden the emission spectra tuning range. KE, no. 5, 1978, 986-994.

2. Theory

34. Gondra, A.D., and N.A. Kozlov (0). Hydroacoustic perturbations of the active medium of liquid lasers. ZhPS, v. 28, no. 6, 1978, 984-991.

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

35. Bondarenko, A.N., and Yu.M. Krinitsyn (0). Frequency stabilization of a He-Ne laser at 0.63 μ in a mode competition oscillatory regime. Avtometriya, no. 3, 1978, 115-120.

36. Byszewski, W., A. Baranowski, and Z. Mucha (NS). Method for fabricating the cathode for a high-power He-Ne laser. Patent Poland, no. 876668, issued 30 May 1977.(RZhRadiot, 6/78, 6Ye136)

37. Chernyavskiy, A.F., Yu.P. Makarov, G.Ya. Lopatov, M.A. Doroshkevich, and V.A. Ganzha (87). Frequency-stabilized He-Ne laser. IN: Tr 2, 62-68. (RZhF, 6/78, 6D1505)

38. Ivanov, P. (NS). Increasing the lifetime of an He-Ne laser. Godishnik na Visshite uchebni zavedeniya. Tekhnicheska fizika, no. 11, 1974(1976), 11-18. (RZhRadiot, 6/78, 6Ye39)

39. Ladygin, M.V., and I.P. Mazan'ko (0). Measurement of natural ellipticity fluctuations in the field polarization of a helium-neon laser with a weakly anisotropic cavity. OiS, v. 44, no. 5, 1978, 998-1000.

40. Petru, F., B. Popela, Z. Vesela, J. Krsek, and M. Jakl (NS). New series of laboratory He-Ne lasers. Jemna mechanika a optika, no. 11, 1977, 297-305. (RZhF, 5/78, 5D961)

2. Moleuclar Beam and Ion

a. CO_2

41. Afonin, Yu.V., G.G. Dolgov-Savel'yev, L.L. Kozorovitskiy, A.M. Orishich, V.K. Orlov, and A.G. Ponomarenko (193). Effect of a magnetic field on the volume discharge excited by an electron beam. KE, no. 5, 1978, 1155-1157.

42. Afonin, Yu.V., A.G. Ponomarenko, A.M. Orishich, and S.P. Shalamov (193). Compact electric discharge CO_2 laser with a radiation energy of 30 joules. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Preprint, no. 4, 1977, 9p. (RZhF, 5/78, 5D977)

43. Anan'yev, Yu.A., D.A. Goryachkin, V.M. Irtuganov, V.P. Kalinin, O.I. Pashkov, and V.A. Solov'yev (0). Photoionization CO_2 laser with an energy of 300 j. KE, no. 6, 1978, 1381-1384.

44. Baranov, V.Yu., V.M. Borisov, Yu.B. Kiryukhin, I.V. Kochetov, V.G. Pevgov, and Yu.Yu. Stepanov (0). Free-running emission from an electric-discharge CO_2 laser in the nanosecond pulse length range. KE, no. 5, 1978, 1141-1143.

45. Baranov, V.Yu., G.F. Drokov, S.A. Kazakov, V.S. Mezhevov, and V.G. Niz'yev (0). Periodic pulsed CO_2 laser. ZhTF, no. 5, 1978, 1039-1040.

46. Barkhudarov, E.M., V.R. Berezovskiy, T.Ya. Chelidze, V.V. Chichinadze, G.V. Gelashvili, and M.I. Taktakishvili (0). Characteristics of a pulsed discharge in a CO_2 laser. IN: Sb 1, 625-626. (RZhF, 6/78, 6G656)

47. Batyrbekov, G.A., S.K. Kinakov, and M.P. Mardenov (0). Kinetics of the processes and electron concentration in a dense plasma of $CO_2+N_2+He^3$ and $CO_2+N_2+He^3+Xe$ gas mixtures produced in a nuclear reactor. IAN Kaz, no. 6, 1977, 56-60. (RZhF, 6/78, 6G675)

48. Bazarov, Ye.N., G.A. Gerasimov, V.P. Gubin, and N.I. Starostin (15). Quantum frequency standard based on a CO_2 laser stabilized by an OsO_4 narrow resonance. Institut radiotekhniki i elektroniki AN SSSR. Preprint, no. 17, 1977, 18 p. (RZhRadiot, 6/78, 6Ye148)

49. Bertel', I.M., B.F. Kuntsevich, V.O. Petukhov, S.A. Trushin, and V.V. Churakov (0). Spectrum broadening of CO_2 pulse laser generation. ZhPS, v. 28, no. 5, 1978, 804-807.

50. Donnerhacke, K.H., M. Schubert, and G. Wiederhold (NS). Theoretical and experimental investigations of the electrical excitation rates in TEA CO_2 lasers. IN: Sb 1, 629-630. (RZhF, 6/78, 6G657)

51. Generalov, N.A., V.P. Zimakov, V.D. Kosynkin, Yu.P. Rayzer, and D.I. Roytenburg (17). Gas pre-ionization by electrodeless capacitive pulses in lasers operating under pulse repetition conditions. KE, no. 5, 1978, 1157-1159.

52. Generalov, N.A., V.P. Zimakov, V.D. Kosynkin, Yu.P. Rayzer, and D.I. Roytenburg (0). High-power non-selfsustained discharge with ionization by repeating electrodeless pulses in a closed cycle laser. IN: Sb 1, 599-600. (RZhF, 6/78, 6G648)

53. Gordiyets, B.F., B. Kosma, A.G. Sviridov, and N.N. Sobolev (1). Pulsed CO_2 laser with wire trigger electrodes, operating at higher than atmospheric pressures. Fizicheskiy institut AN SSSR. Preprint, no. 107, 1977, 30 p. (RZhF, 6/78, 6D1434)

54. Gutu, I.L., C.P. Ghilac, N. Comaniciu, I. Farcas, C. Axinte, and I. Ivanov (NS). Method for developing CO_2-N_2-He lasers in a high-energy and high pulse repetition rate regime. Patent Romania, no. 61728, issued 19 October 1976. (RZhF, 5/78, 5D978)

55. Karnyushin, V.N., B.A. Knyazev, A.N. Malov, and R.I. Soloukhin (193). Pulse electrical discharge in a $CO_2 + N_2 +$ He mixture in the presence of a temperature and density gradient in the near-cathode layer. ZhTF, no.6, 1978, 1170-1173.

56. Konyev, Yu.B. (0). Possibility of stationary and quasistationary lasing in a gas-discharge CO_2 laser with a partial inversion at 16 μ. ZhTF P, no. 11, 1978, 677-680.

57. Leshenyuk, N.S., V.V. Nevdakh, L.N. Orlov, S.A. Trushin, and V.V. Churakov (0). Invesigation of the energy relaxation rate of an antisymmetric type of CO_2 molecule vibration as a function of temperature. ZhPS, v. 28, no. 6, 1978, 978-983.

58. Lobanov, A.N., V.K. Orlov, A.F. Suchkov, and B.M. Urin (1). Parametric study of the energy characteristics of a CO_2 electroionization laser. Fizicheskiy institut AN SSSR. Preprint, no. 199, 1977, 30 p. (RZhF, 6/78, 6D1429)

59. Risbud, A.V., and M.S. Naidu (NS). Ionization current growth in carbon dioxide, nitrogen and their mixtures. IN: Sb 2, 21-22. (RZhRadiot, 5/78, 5Ye21)

60. Tatu, V. (NS). High-power pulsed CO_2 laser. Patent Romania, no. 61348, issued 5 October 1976. (RZhRadiot, 6/78, 6Ye10)

61. Trushin, S.A., and V.V. Churakov (0). Increase in the efficiency of powerful CO_2 amplifiers in the short pulse amplification mode. ZhTF P, no. 11, 1978, 663-666.

62. Vargin, A.N., V.V. Gogokhiya, V.K. Konyukhov, and A.I. Lukovnikov (1). Model for kinetic cooling of carbon dioxide gas. KE, no. 6, 1978, 1391-1394.

63. Zaroslov, D.Yu., N.V. Karlov, G.P. Kuz'min, and S.M. Nikiforov (1). Spectral characteristics of CO_2 laser pre-ionization sources in the vacuum UV region. KE, no. 6, 1978, 1221-1229.

64. Zhelud'ko, I.A., A.G. Guyvan, A.B. Makhotenko, and Yu.V. Titov (0). Stabilizing CO_2 laser frequency at the maximum radiation power. IN: Sb 3, 25-33. (RZhF, 6/78, 6D1506)

b. CO

65. Dorosh, V.S., L.F. Dobro, and E.N. Lotkova (343). Experimental determination of the gas temperature of the active medium of an electric discharge CO laser. IN: Tr 3, 43-45. (RZhF, 5/78, 5D971)

66. Konev, Yu.B., I.V. Kochetov, and V.G. Pevgov (118). Analysis of the stationary electrical discharge characteristics of a CO laser. ZhTF, no. 5, 1978, 977-982.

67. Konev, Yu.B., I.V. Kochetov, A.K. Kurnosov, and V.G. Pevgov (0). Study on the possibility of lasing at overtones of a CO molecule during pumping in an electric discharge. ZhTF P, no. 23, 1977, 1267-1271. (RZhF, 6/78, 6D1421)

68. Krasa, J., M. Novak, M.Z. Novgorodov, and L. Rothardt (0). Striations in a low pressure discharge CO laser. IN: Sb 2, 289-290. (RZhMekh, 5/78, 5B383)

69. Naumov, V.G., and V.M. Shashkov (0). Combined discharge in a supersonic gas flow. ZhTF P, no. 21, 1977, 1131-1132. (RZhF, 5/78, 5G372)

c. Noble Gas

70. Ebert, W. (NS). Energy balance of noble gas ion laser discharges. IN: Sb 1, 651-652. (RZhF, 6/78, 6G668)

71. Lis, L. (NS). Picture of "spatial anisotropy" induced by cascade laser transitions $5s'[1/2]_1^0 \rightarrow 4p'[1/2]_0 \rightarrow 3d'[3/2]_1^0$. Acta physica polonica, v. A52, no. 5, 1977, 611-617. (RZhF, 6/78, 6D1411)

72. Redlich, L. (NS). Ion acoustic waves in noble gas ion lasers. IN: Sb 1, 653-654. (RZhF, 6/78, 6G669)

73. Shevera, V.S., V.F.Z. Papp, and I.P. Zapesochnyy (136). Investigation of s-, p-, and d- electron stripping processes and formation of population inversion at intrashell transitions of inert gas atoms. UFZh, no. 6, 1978, 1040-1042.

d. N_2

74. Guendel, H., and J. Irmer (NS). Emission properties of nitrogen laser discharges. IN: Sb 1, 647-648. (RZhF, 6/78, 6G665)

75. Kravchenko, V.F., V.G. Il'yushko, V.S. Mikhalevskiy, and V.A. Polunin (343). Gas laser with increased average specific power. IN: Tr 3, 34-35. (RZhF, 5/78, 5D975)

e. N_2O

76. Biryukov, A.S., R.I. Serikov, and A.I. Starik (1). Population inversion in vibrational levels of N_2O behind the shock wave front. KE, no. 6, 1978, 1291-1297.

f. Submillimeter

77. Lom, T. (NS). Between microwave and infrared radiation [submillimeter lasers]. Sdelovaci technika, no. 12, 1977, 475-476. (RZhRadiot, 5/78, 5Yell)

78. Manita, O.F. (34). Submillimeter laser with optical pumping using the molecules NH_3, CH_3F, CH_3J, and D_2O. UFZh, no. 6, 1978, 1015-1017.

g. Metal Vapor

79. Besedina, A.N., G.I. Khvostenko, and M.P. Chayka (0). Analysis of optical pumping in an atomic beam. OiS, v. 44, no. 5, 1978, 974-980.

80. Bokhan, P.A., V.M. Klimkin, and V.Ye. Prokop'yev (0). Characteristics of electric discharges in mixtures of metal vapors and noble gases at increased pressures. IN: Sb 1, 641-642. (RZhF, 6/78, 6G662)

81. Burmakin, V.A., A.N. Yevtyunin, M.A. Lesnoy, and V.I. Bylkin (0). Sealed-off copper vapor laser with a long service life. KE, no. 5, 1978, 1000-1004.

82. Dobritz, G., and B. Luemkemann (NS). Device to protect a cathode from metal vapor deposition. Patent GDR, no. 125951, issued 8 June 1977. (RZhRadiot, 5/78, 5Ye258)

83. Gridnev, A.G., T.M. Gorbunova, V.F. Yelayev, G.S. Yevtushenko, N.V. Osipova, and A.N. Soldatov (0). Spectroscopic study of a gas-discharge pulsed plasma in a Cu + Ne laser. KE, no. 5, 1978, 1147-1151.

84. Kartazayev, V.A., Yu.A. Piotrovskiy, and Yu.A. Tolmachev (12). Processes for exciting the Hg (II) spectrum in the afterglow of a discharge in an He-Hg mixture. Leningradskiy universitet. Vestnik, no. 22, 1977, 42-49. (RZhF, 5/78, 5D481)

85. Kazaryan, M.A., T.I. Pekhoshkina, and A.N. Trofimov (1). Medium lasing powers attained by metal halide vapor lasers. KSpF, no. 10, 1977, 34-36. (RZhF, 5/78, 5D966)

86. Klimovskiy, I.I., and P.A. Vokhmin (0). Correlation of copper vapor laser emission pulse characteristics with plasma parameters. IN: Sb 1, 635-636. (RZhF, 6/78, 6G660)

87. Prokop'yev, V.Ye., and V.M. Klimkin (78). On the optimal excitation-pulse repetition rate for lasers with self-limited metal transitions. IVUZ Fiz, no. 5, 1978, 152-153.

88. Rodin, A.V., and Yu.K. Zemtsov (0). Electron energy distribution function for copper vapor. IN: Sb 1, 637-638. (RZhF, 6/78, 6G18)

89. Yelayev, V.F., A.Ye. Kirilov, Yu.P. Polunin, A.N. Soldatov, and V.A. Fedorov (0). Experimental investigation of a pulse discharge in a Cu + Ne mixture in a high repetition rate regime. IN: Sb 1, 639-640. (RZhF, 6/78, 6G661)

90. Zhukov, V.V., Ye.L. Latush, and M.F. Sem (343). Pulsed lasing at ion and atomic transitions in lead. IN: Tr 3, 32-34. (RZhF, 5/78, 5D965)

h. Gasdynamic

91. D'yakov, A.S., A.I. Didyukov, B.K. Tkachenko, and Ye.M. Cherkasov (118). Gain from injection of CO_2 gas into a supersonic flow containing CO. KE, no. 5, 1978, 1166-1168.

92. Glotov, Ye.P., V.A. Danilychev, A.Ye. Kruglyy, V.V. Pustovalov, and A.M. Soroka (1). Effect of gasdynamic motion of an active medium in a pulsed pumping current on the refraction of pulsed electroionization laser radiation. KSpF, no. 1, 1978, 43-49. (RZhF, 6/78, 6D1449)

93. Stotskiy, G.I., R.S. Ivanov, N.M. Korolev, and M.M. Malikov (74). On the interaction rate between cesium and CO_2 in the gas mixture of a fast flow-through laser. TVT, no. 3, 1978, 661-662.

94. Vedeneyev, A.A., A.Yu. Volkov, A.I. Demin, A.N. Logunov, Ye.M. Kudryavtsev, and N.N. Sobolev (0). Gasdynamic laser with thermal pumping at the transistions between the CO_2 deformation and symmetric modes. ZhTF P, no. 11, 1978, 681.

95. Volkov, A.Yu., A.I. Demin, and A.V. Krauklis (1). Comparison of CO_2 and N_2O gasdynamic lasers in terms of the radiation energy in a mixed circuit. Fizicheskiy institut AN SSSR. Preprint, no. 189, 1977, 15 p. (RZhF, 6/78, 6D1441)

96. Yevtyukhin, N.V., A.P. Genich, A.A. Yudanov, and G.B. Manelis (67). Gain of single-component active media in CO_2 gasdynamic lasers using combustion products. KE, no. 5, 1978, 1013-1018.

97. Zhinzhikov, G.M., G.A. Luk'yanov, V.V. Nazarov, and N.O. Pavlova (113). Population inversion of helium levels in a supersonic plasma expansion. ZhTF, no. 5, 1978, 949-955.

3. Excimer

98. Belousova, I.M., Yu.I. Dymshits, A.G. Kavetskiy, V.A. Korobitsyn, and V.G. Neverov (0). Investigation of emission from compressed xenon subjected to a fast electron beam. OiS, v. 44, no. 5, 1978, 952-956.

99. Bychkov, Yu.I., M.N. Kostin, V.F. Tarasenko, and A.I. Fedorov (78). Electric-discharge excimer laser. KE, no. 5, 1978, 1164-1166.

100. Bychkov, Yu.I., V.F. Losev, G.A. Mesyats, and V.F. Tarasenko (0). E-beam-pumped XeCl laser. ZhTF P, no. 23, 1977, 1233-1236. (RZhF, 6/78, 6D1455)

101. Yeletskiy, A.V. (23). Excimer lasers. UFN, v. 125, no. 2, 1978, 279-314.

4. Theory

102. Borisevich, N.A., A.Ya. Gorelenko, I.I. Kalosha, V.A. Povedaylo, and V.A. Tolkachev (0). New active materials for lasers using the vapors of complex organic compounds. ZhPS, v. 28, no. 5, 1978, 906-908.

103. Igoshin, V.I., and A.N. Orayevksiy (1). Hydrogen halide lasers with vibration energy transfer from metastable diatomic molecules. KE, no. 5, 1978, 1048-1056.

104. Mikheyev, L.D. (0). Gas lasers with wideband optical pumping (survey). KE, no. 6, 1978, 1189-1220.

105. Pashkin, S.V., and P.I. Peretyat'ko (0). The effect of gas flow temperature on a high-voltage diffuse discharge. KE, no. 5, 1978, 1159-1160.

106. Poehler, M., F. Echtermeyer, and D. Heise (NS). Optical transmitter or amplifier with a stimulated medium consisting of CO_2, N_2, He, and H_2, and a method for maintaining a high output power. Patent GDR, no. 125460, issued 20 April 1977. (RZhRadiot, 6/78, 6Ye31)

107. Ross, W., and K. Seliger (NS). Pulsed gas laser. Patent GDR, no. 125046, issued 30 March 1977. (RZhRadiot, 5/78, 5Ye64)

108. Voytovich, A.P., V.G. Dubovets, and A.P. Shkadarevich (0). Influence of interference of atomic states on the polarization characteristics of mutlifrequency gas laser radiation. OiS, v. 44, no. 5, 1978, 981-987.

D. CHEMICAL LASERS

1. Photodissociative

109. Gordon, Ye.B., A.K. Kurnosov, and S.A. Sotnichenko (67). Stimulated emission of IR radiation during BrCn photolysis by radiation at $\lambda > 180$ nm. KE, no. 5, 1978, 1144-1147.

110. Pravilov, A.M., A.S. Kozlov, and F.I. Vilesov (441). Study of the spectral dependence of absolute quantum yields of the $I(^2P_{1/2})$ and $I(^2P_{3/2})$ formation during photolysis of C_3F_7I, CF_3CFICF_3 and $CF_3OCF_2CF_2I$ in the first absorption band. KE, no. 5, 1978, 1161-1164.

E. COMPONENTS

1. Resonators

a. Design and Performance

111. Ebert, W. (NS). Discharge tube for noble gas ion lasers. Patent GDR, no. 124942, issued 23 March 1977. (RZhRadiot, 5/78, 5Ye262)

112. Epishin, V.A. (34). Open resonators with apertures in the reflectors. KE, no. 6, 1978, 1263-1271.

113. Gembarzhevskiy, G.V. (133). Designing an unstable resonator for a flow-through laser with a geometric optics approach. IN: Tr 4, 123-127. (RZhF, 6/78, 6D1379)

114. Kushnir, V.R., and A.A. Shokin (0). Frequency mode degeneracy in a c-w solid state laser with a plane-spherical resonator. KE, no. 6, 1978, 1244-1247.

115. Kushnir, V.R. (0). Caustic stability in plane-spherical resonators with an internal lens. KE, no. 6, 1978, 1248-1256.

116. Polze, S. (NS). Single-mode laser resonator. Patent GDR, no. 124695, issued 9 March 1977. (RZhRadiot, 5/78, 5Ye156)

b. Mode Kinetics

117. Vinokurov, G.N., and V.I. Zhulin (0). Allowing for the effect of the longitudinal mode selector on the losses and transverse field structure in an optical resonator. OiS, v. 44, no. 5, 1978, 988-993.

2. Pump Sources

118. Azizov, E.A., R.P. Vasil'yev, and V.G. Nikolayevskiy (0). Engineering problems in developing multi-flashlamp systems for pumping high-power solid-state lasers for laser fusion. IN: Sb 4, 145-152. (RZhF, 6/78, 6G390)

119. Besedovskiy, R.Z., K.A. Kondrat'yev, M.A. Sungurovskiy, and V.I. Shchupak (0). Semiconductor ignition pulse shape of laser flashlamps. PTE, no. 3, 1978, 138-139.

120. Byalko, N.G., G.A. Matyushin, L.S. Mel'nikov, and V.M. Podgayetskiy (0). Destruction of flashlamps in a fluid. ZhPS, v. 28, no. 5, 1978, 791-795.

121. Ignat'yev, L.P., Yu.A. Kolesnikov, and G.V. Smirnov (0). Optimizing a system for pumping a high-power single-pulse solid-state laser. IN: Sb 4, 137-144. (RZhF, 6/78, 6G405)

122. Korochkin, L.S., and S.A. Mikhnov (0). Change in the parameters of IFS-1200 pulse lamps in different discharge regimes. ZhPS, v. 28, no. 6, 1978, 1098-1099.

123. Sungurovskiy, M.A., and R.Z. Besedovskiy (0). Synchronization of pumping lamp ignition in a Q-switched laser. PTE, no. 3, 1978, 200-201.

124. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (3). Pulse gas discharge lamp supply unit. Otkr izobr, no. 19, 1978, 546249.

125. Valyavko, V.V., A.A. Mozgo, and B.V. Krylov (3). Supply unit for laser pulsed flashlamps. Otkr izobr, no. 21, 1978, 531472.

126. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (3). Flashlamp supply unit. Otkr izobr, no. 23, 1978, 484813.

127. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (3). Smooth pumping energy regulation method in laser supply systems. Otkr izobr, no. 23, 1978, 538627.

128. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (3). Laser control and supply unit. Otkr izobr, no. 24, 1978, 318113.

129. Zhinkrup, A.I., and S.A. Boldyrev (0). Band flashlamp. Author's certificate USSR, no. 561232, issued 23 September 1977. (RZhRadiot, 5/78, 5Ye253)

3. Deflectors

130. Ovvyan, P.P. (135). Device for spatial deflection of an optical beam. Author's certificate USSR, no. 561927, issued 22 July 1977. (RZhRadiot, 5/78, 5Ye151)

4. Diffraction Gratings

131. Bessonov, A.F., A.I. Gudzenko, V.F. Terichev, and N.I. Chernyshev (7). Chalcogenide glass and barium fluoride radiation grating in a planar waveguide of the middle IR band. OMP, no. 5, 1978, 74-75.

132. Mustafin, K.S., and V.A. Seleznev (0). Aberrational characteristics of holographic diffraction gratings. IN: Sb 5, 39-56. (RZhF, 6/78, 6D1757)

5. Filters

133. Korkhov, Ye.L. (87). Some characteristics of selecting laser radiation by interference light filters during temperature change of the surrounding medium. IN: Tr 2, 42-45. (RZhF, 6/78, 6D1621)

134. Sidorenko, A.V., and A.V. Kopulov (87). Study of local transmissivity of interference light filters. IN: Tr 2, 79-81. (RZhF, 6/78, 6D1722)

6. Mirrors

135. Apollonov, V.V., A.I. Barchukov, V.I. Borodin, P.I. Bystrov, V.F. Goncharov, L.M. Ostrovskaya, A.M. Prokhorov, V.N. Rodin, Ye.V. Troshin, V.Yu. Khomich, M.I. Tsypin, Yu.F. Shevakin, and Ya.Sh. Shur (1). Possibility of using an open-pore structure in designing cooled laser mirrors. KE, no. 5, 1978, 1169-1171.

136. Orlov, V.K., Ya.Z. Virnik, S.P. Vorotilin, V.B. Gerasimov, Yu.A. Kalinin, and A.Ya. Sagalovich (0). Retroreflecting mirror for dynamic compensation of optical inhomogeneities. KE, no. 6, 1978, 1389-1391.

7. Detectors

137. Andriyesh, A.M., Yu.A. Bykovskiy, V.L. Smirnov, M.R. Cherniy, and A.V. Shmal'ko (16, 44). Photodetector elements and relief-type diffraction gratings in As_2S_3 thin films for integrated optics. KE, no. 5, 1978, 1090-1094.

138. Beregulin, Ye.V., P.M. Valov, S.M. Ryvkin, D.V. Tarkhin, and I.D. Yaroshetskiy (4). Superquick-response uncooled photodetector based on intrazonal μ-photoconductivity. KE, no. 6, 1978, 1386-1389.

139. Dolgopolov, S.G., V.M. Klement'yev, V.I. Kovalevskiy, Yu.A. Matyugin, and B.A. Timchenko (0). Optimization of the operation of a silicon point diode as submillimeter band detector and mixer. RiE, no. 5, 1978, 1106-1108.

140. Ivannikova, G.Ye., F.F. Igoshin, A.P. Kir'yanov, and M.A. Tulaykova (118). Measuring the threshold of sensitivity of n-InSb submillimeter radiation detectors. IN: Tr 5, 27-32. (RZhF, 5/78, 5D1176)

141. Mirzabekyan, E.G., Yu.A. Abramyan, Z.N. Adamyan, V.M. Arutyunyan, and R.G. Simonyan (0). Highly sensitive infrared radiometer. DAN Arm, no. 5, 1977, 285-290. (RZhF, 5/78, 5D1168)

142. Vodop'yanov, L.K., L.V. Golubev, B.D. Kopylovskiy, and V.G. Plotnichenko (118). Using a silicon photodiode with an operational amplifier to record weak optical signals. IN: Tr 5, 156-160. (RZhF, 5/78, 5D1177)

8. Modulators

143. Adrianova, I.I., V.R. Zaslavskaya, N.F. Stepanenko, and G.G. Chizhikov (7). Phase electrooptical modulator of unpolarized radiation. OMP, no. 6, 1978, 24-26.

144. Alexandrescu, R., D.C. Dumitras, D.C. Dutu, N. Comaniciu, and V. Draganescu (NS). CO_2 laser absorption measurements and Stark modulation using C_2H_3Cl gas. Revue roumaine de physique, no. 8, 1977, 793-810. (RZhF, 6/78, 6D1497)

145. Azovtsev, V.P., O.V. Golosnoy, N.N. Yevtikhiyev, G.R. Levinson, Yu.A. Snezhko, and V.P. Tychinskiy (161). Feasibility of using laser interferometry to study the characteristics of controlled dynamic gelatinous optical modulators. KE, no. 6., 1978, 1372-1375.

146. Belousov, B.I., Ye.K. Mineyev, V.Ye. Andryushin, V.N. Kryuchenko, M.V. Belousova, and V.M. Volkov (161). Light modulator. Author's certificate USSR, no. 552582, issued 20 May 1977. (RZhRadiot, 6/78, 6Ye77)

147. Bugayev, A.A., B.P. Zakharchenya, Ye.I. Terukov, and F.A. Chudnovskiy (0). Use of vanadium oxides for spatial modulators of light. IN: Sb 6, 94-102. (RZhF, 5/78, 5D1232)

148. Dun, A.Z., A.Ye. Tolmacheva, A.I. Krivoruchko, A.B. Panov, A.A. Mostovskiy, and G.N. Shcherbakov (0). Electrooptical spatial modulator of light with e-beam address. IN: Sb 6, 119-124. (RZhRadiot, 5/78, 5Ye139)

149. Gnatovskiy, A.V., A.P. Loginov, N.M. Medved', M.V. Nikolayev, and M.T. Shpak (5). Interferometer method of multiplying laser beams. DAN Ukr, no. 5, 1978, 449-452.

150. Gurevich, S.B. (0). Spatial modulators of light. IN: Sb 6, 4-18. (RZhRadiot, 5/78, 5Ye138)

151. Kotlyar, P.Ye., Ye.S. Nezhevenko, and V.I. Fel'dbush (0). Space-time modulator of light for introducing an image into a coherent optical system. IN: Sb 6, 113-118. (RZhF, 5/78, 5D1206)

152. Shaposhnikov, B.G., and A.I. Yeliseyev (110). Ultrasonic modulator of light. IN: Tr 6, 58-62. (RZhRadiot, 6/78, 6Ye75)

153. Smirnov, I.A., and S.G. Shul'man (0). Samarium monosulfide: a new material for spatial modulation of light. IN: Sb 6, 102-106. (RZhF, 5/78, 5D1215)

154. Volkov, V.V., G.A. Yegorova, E.S. Lonskiy, Ye.V. Potapov, and A.V. Rakov (0). Light propagation in a lithium niobate crystal along directions close to the optical axes. Kristal, no. 3, 1978, 465-470.

F. NONLINEAR OPTICS

1. Frequency Conversion

155. Arkhipin, V.G., A.K. Popov, and V.P. Timofeyev (210). Frequency conversion of IR radiation to the visible and UV ranges in gaseous nonlinear media, based on resonance four-photon parametric processes. Institut fiziki SOAN. Preprint, no. 66-F, 1977, 21 p. (RZhF, 5/78, 5D907)

156. Dencheva, M.G., and P.N. Zanadvorov (0). Second harmonic generation in an external optical resonator. OiS, v. 44, no. 5, 1978, 994-997.

157. Genkin, G.M., and V.V. Zil'berberg (426). Frequency tripling and self-action of a strong electromagnetic wave in semiconductors with zero forbidden band. FTP, no. 5, 1978, 841-844.

158. Grin', Yu.G., Yu.N. Karamzin, and A.P. Sukhorukov (71). Efficiency of frequency doubling of high-power optical radiation. Institut prikladnoy matematiki AN SSSR. Preprint, no. 100, 1977, 30 p. (RZhF, 5/78, 5D900)

159. Makarenko, B.I., A.S. Sultanov, M.A. Ivanov, V.P. Breslavets, and V.V. Shmidt (0). Selecting the optimal values of phase automatic frequency control in frequency standards with a laser. IN: Sb 7, 57-62. (RZh Radiot, 5/78, 5Ye284)

160. Rubenchik, A.M. (0). Absorption of powerful laser light and harmonic generation. IN: Sb 1, 887-888. (RZhRadiot, 5/78, 5Ye125)

161. Slabko, V.V., A.K. Popov, and V.F. Lukinykh (0). Third and fifth harmonic generation in a tunable Nd laser in cesium vapor under quasiresonance conditions. ZhTF P, no. 23, 1977, 1263-1267. (RZhF, 6/78, 6D1348)

162. Slabko, V.V., A.K. Popov, and V.F. Lukinykh (210). Generation of coherent radiation at 89.6 nm by tripling the fourth harmonic of a neodymium glass laser under conditions of two-photon resonance and phase matching in mercury vapor. Institut fiziki SOAN. Preprint, no. 63f, 1977, 20 p. (RZhF, 6/78, 6D1352)

163. Yesayan, S.Kh., V.V. Lemanov, and B.V. Sukharev (0). Optical harmonic generation in planar lithium niobate lightguides. ZhTF P, no. 12, 1978, 747.

164. Zakharov, N.A., S.Yu. Stefanovich, V.S. Krikorov, and Ye.F. Kustov (0). Obtaining crystals and investigating second harmonic generation in compounds of the composition $A_2B_2O_7$. ZhTF P, no. 11, 1978, 636-639.

2. Parametric Processes

165. Mista, L., and J. Perina (NS). Anticorrelation effect in parametric amplification processes. Acta physica polonica, v. A52, no. 3, 1977, 425-430. (RZhF, 6/78, 6D1287)

3. Stimulated Scattering

a. Raman

166. Bel'dyugin, I.M., Ye.M. Zemskov, and V.I. Chernen'kiy (0). The theory of amplification of the first Stokes component in a nonmonochromatic pumping field under stimulated Raman scattering. KE, no. 6, 1978, 1349-1359.

167. Dianov, Ye.M., S.K. Isayev, L.S. Korniyenko, N.V. Kravtsov, and V.V. Firsov (1,2). Raman laser with a lightguide resonator. KE, no. 6, 1978, 1305-1309.

168. Grebenyuk, V.N., V.M. Izgorodin, S.B. Kormer, and K.B. Yushko (0). Infrared Raman laser with an unstable resonator. KE, no. 6, 1978, 1365-1368.

169. Korolev, F.A., V.A. Mikhaylov, and V.I. Odintsov (0). Investigation of the infrared stimulated Raman scattering in rubidium vapors for varying widths of the pumping spectrum. OiS, v. 44, no. 5, 1978, 907-912.

170. Pavlov, L.Y. (NS). Anti-Stokes radiation in a field of Gaussian noise pumping. Bulgarska akademiya na naukite. Doklady, no. 10, 1977, 1399-1401. (RZhF, 5/78, 5D888)

171. Rezayev, N.I., and M.B. Tabibi (0). Investigation of the degree of depolarization of stimulated Raman scattering lines in solutions. OiS, v. 44, no. 6, 1978, 1204-1206.

172. Sidorovich, V.G. (0). Reproduction of the pumping spectrum under stimulated Raman scattering. KE, no. 6, 1978, 1370-1372.

b. Miscellaneous Scattering

173. Baranov, N.B., B.Ya. Zel'dovich, and V.V. Shkunov (1). Wavefront rotation during stimulated light scattering in a focused, spatially inhomogeneous pumping beam. KE, no. 5, 1978, 973-985.

174. Morozov, S.F., L.V. Piskunova, M.M. Sushchik, and G.I. Freydman (426). Shaping and amplification of quasi-soliton pulses during oncoming stimulated scatterings. KE, no. 5, 1978, 1005-1012.

175. Pasmanik, G.A. (0). Reconstruction of the wave front of complex signals in forced back-scattering. ZhTF P, no. 9, 1978, 504-507.

176. Zel'dovich, B.Ya., and V.V. Shkunov (1). Reversal of a wave front in stimulated scattering in a spatially inhomogeneous state of pumping polarization. Fizicheskiy institut AN SSSR. Preprint, no. 1, 1978, 24 p. (RZhF, 6/78, 6D1327)

4. Self-focusing

177. Korobkin, V.V., and S.L. Motylev (1). On a possible self-focusing mechanism in a plasma. ZhETF P, v. 27, no. 10, 1978, 557-561.

178. Yerokhin, A.I., N.V. Morachevskiy, and F.S. Fayzullov (1). Thermal self-focusing of a laser beam having space and time inhomogeneity. KE, no. 5, 1978, 1119-1123.

5. Acoustic Interaction

179. Benedichuk, I.V., Yu.L. Oboznenko, Ye.I. Smirnov, and L. Ye. Chirkov (144,51). Optical device to reproduce TV signals, based on an acousto-optical deflector. TKiT, no. 6, 1978, 3-10.

180. Bozhkov, A.I., and L.L. Gyrdev (1). Statistical characteristics of a "floating" opto-acoustical antenna. KE, no. 5, 1978, 1019-1027.

181. Grishmanovskiy, A.N., V.V. Lemanov, and M. Sattikulov (0). Acoustooptical interaction in lead molybdate and paratellurate crystals under a high intensity light. ZhTF P, no. 12, 1978, 706-709.

182. Gudaylis, V.V., A.S. Yuozopavichyus, A.S. Piskarskas, and I.Yu.Yu. Slavenas (49). Opticoacoustic effect in solutions of polymethine dyes. Litovskiy fizicheskiy sbornik, no. 3, 1978, 395-398.

183. Kasoyev, S.G. (21). Influence of a harmonic change in the modulation frequency of the laser beam intensity on the acoustic field generated in a fluid. Akusticheskiy zhurnal, no. 3, 1978, 427-429.

184. Mandel', A.Ye., and S.M. Shandarov (0). Recording of a phase array for acoustooptical interaction in a lithium niobate crystal. ZhTF P, no. 12, 1978, 737-739.

185. Markovich, I.E., I.V. Nemchinov, A.I. Petrukhin, Yu.Ye. Pleshanov, V.A. Rybakov, and V.A. Sulyayev (0). Low-threshold supersonic radiation waves in xenon and their overlapping of a laser beam section. ZhTF P, no. 9, 1978, 529-532.

186. Voytenko, I.G., and V.P. Red'ko (0). Light diffraction by opposed acoustic surface waves in optical waveguides. ZhTF P, no. 12, 1978, 703-705.

6. Birefringence

187. Bonch-Bruyevich, A.M., T.K. Razumova, and I.O. Starobogatov (0). Induced birefringence of a dye solution because of bleaching dichroism. OiS, v. 44, no. 5, 1978, 957-961.

188. Dub, I.S. (0). Effect of various factors on birefringence in angular analyzers. IN: Sb 8, 63-70. (RZhF, 6/78, 6D1842)

7. General Theory

189. Arutyunyan, V.M., and S.G. Oganesyan (0). Stimulated multiphoton interaction of charged particles with intense laser radiation in inhomogeneous media. IN: Sb 9, 473-479. (RZhF, 6/78, 6D1491)

190. Badziak, J., and Z. Jankiewicz (NS). Nonlinear amplification of strong light pulses in multicomponent media. Acta physica polonica, v. A53, no. 1, 1978, 99-113. (RZhRadiot, 6/78, 6Ye2)

191. Glushko, B.A., and V.O. Chaltykyan (0). Nonlinear Faraday effect in resonance media. KE, no. 5, 1978, 1107-1112.

192. Il'inov, M.P. (343). Stationary pulses in a four-level optical amplifier. IN: Tr 3, 35-38. (RZhF, 5/78, 5D863)

193. Karamzin, Yu.N., A.P. Sukhorukov, and T.S. Filipchuk (71). Soliton regime of three-frequency coherent interactions of pulses during dispersion of group velocities. Institut prikladnoy matematiki, AN SSSR. Preprint, no. 101, 1977, 33 p. (RZhF, 6/78, 6D1295)

194. Petnikova, V.M. (2). Visualizing IR images in stratified media. KE, no. 6, 1978, 1363-1364.

195. Piekara, A.N., and B. Ratajska (NS). Nonlinear interaction of picosecond light pulses with crystal lattice vibrations. Acta physica polonica, v. A53, no. 1, 1978, 115-121. (RZhRadiot, 6/78, 6Ye183)

196. Rozanov, N.N. (0). Reflection of a plane wave by nonlinear media. ZhTF p, no. 2, 1978, 74-78. (RZhF, 6/78, 6D1294)

197. Salayev, E.Yu., K.R. Allakhverdiyev, and T.G. Mamedov (60). Optical and nonlinear optical properties of laminar compounds. IAN Az, no. 4, 1978, 49-59.

198. Voropay, Ye.S., A.M. Sarzhevskiy, A.N. Sevchenko, and P.A. Torpachev (87). Experimental methods for studying two-photon absorption. Deposit at VINITI, no. 316-78, 26 p. (RZhF, 5/78, 5D872)

G. SPECTROSCOPY OF LASER MATERIALS

199. Mazurak, Z., K. Bukietynska, and B. Jezowska-Trzebiatowska (NS). Spectroscopic properties of liquid laser materials: Nd_2O_3-$ZrCl_4$-$POCl_3$. BAPS Ser sci chim, no. 11, 1976(1977), 909-914. (RZhF, 6/78, 6D1400)

200. Safaryan, F.P. (59). Analysis of the phononless line width in the $^4I_{9/2} \leftrightarrow {}^4F_{3/2}$ luminescence band of a YAG-Nd^{3+} crystal. FTT, no. 5, 1978, 1563-1565.

H. ULTRASHORT PULSE GENERATION

201. Kovalev, A.A., L.V. Levashkevich, and S.N. Zhdanovich (0). Generation of picosecond pulses in a ruby laser with passive inclusion of an electrooptical shutter. ZhTF P, no. 11, 1978, 643-645.

202. Kuch'yanov, A.S., V.D. Ugozhayev, and K.G. Folin (0). Method for increasing the reproducibility and reducing the duration of ultrashort light pulses. ZhTF P, no. 23, 1977, 1259-2163. (RZhF, 6/78, 6D1496)

203. Lariontsev, Ye.G., and V.N. Serkin (0). Optimal conditions for the process of ultrashort light pulse generation. ZhTF P, no. 11, 1978, 650-653.

204. Mory, S., and R. Koenig (NS). Generation of dye laser subnanosecond single pulses by build-up of oscillations in dye lasers. Experimentalle Technik der Physik, no. 6, 1977, 581-591. (RZhF, 6/78, 6D1501)

J. THEORETICAL ASPECTS OF ADVANCED LASERS

205. Bushuyev, V.A., A.V. Kolpakov, R.N. Kuz'min, E.M. Saprykin, and D.A. Shalabayev (2). Use of Coulomb excitation to obtain powerful, including laser, gamma-radiation sources. VMU, no. 3, 1978, 101-103.

206. Kovalev, G.V. (0). Gamma-laser and charged particle radiation during channeling. ZhTF P, no. 10, 1978, 592-595.

K. GENERAL LASER THEORY

207. Akanayev, B.A. (0). Commutative relationships between the density and amplitude matrices of an electromagnetic field. IAN Kaz, no. 4, 1978, 65-68.

208. Berman, G.P., and G.M. Zaslavskiy (210). Stochastic instability of a nonlinear quantum oscillator. DAN SSSR, v. 240, no. 5, 1978, 1082-1085.

209. Biberman, L.M., A.I. Gleyzer, and G.A. Kobzev (74). Limit characteristics of superluminescence. DAN SSSR, v. 240, no. 1, 1978, 62-65.

210. Gayner, A.V., K.P. Komarov, and K.G. Folin (10). Theory of lasing dynamics in solid-state lasers. Institut fiziki poluprovodnikov SOAN. Preprint, no. 8, 1976(1977), 37 p. (RZhF, 5/78, 5D924)

211. Gaysenok, V.A., I.I. Zholnerevich, and A.M. Sarzhevskiy (0). Role of diffusion molecule rotation in absorption from excited states. ZhPS, v. 28, no. 5, 1978, 827-831.

212. Kozlov, N.P., V.A. Malashchenko, and Yu.S. Protasov (0). Possibility of producing highly-efficient radiation sources operating with a pulse repetition rate based on the discharge by hypersonic plasma jets. ZhPS, v. 28, no. 5, 1978, 787-790.

213. Kraynov, V.P. (16). Two-photon resonance scattering in a strong field. ZhETF, v. 74, no. 5, 1978, 1616-1620.

214. Prokhorov, A.M., A.A. Spikhal'skiy, and V.A. Sychugov (1). Hybrid modes in radiating structures of distributed negative feedback. KE, no. 5, 1978, 1057-1064.

215. Richter, G. (NS). Quantum theoretical problems of laser physics. Akademie der Wissenschaften, DDR. Mathematik, Naturwissenschaft, Technik. Abhandlungen, no. 7, 1977, 245-267. (RZhF, 5/78, 5D915)

216. Romanov, G.N. (0). Discontinuity in the reflection coefficient of a plane electromagnetic wave during "total internal reflection" from the population inversion domain. UFZh, no. 5, 1978, 818-826.

217. Veklenko, B.A., and A.K. Lebedev (19). On phase relationships in quantum optics and brehmstrahlung structure. IVUZ Fiz, no. 6, 1978, 22-28.

218. Vetchinkin, S.I., V.L. Bakhrakh, and I.M. Umanskiy (0). Resonance charge transfer in a laser radiation field. OiS, v.44, no. 5, 1978, 857-862.

219. Yevdokimov, Yu.V. (0). On the possibility of producing a laser using the vibrational-rotational transitions of a HD molecule. OiS, v.44, no. 6, 1978, 1190-1192.

II. LASER APPLICATIONS

A. COMMUNICATIONS SYSTEMS

220. Anikin, V.I., L.N. Deryugin, D.A. Letov, A.N. Polovinkin, and V.E. Sotin (14). Experimental investigation of passive planar optical elements. ZhTF, no. 5, 1978, 1005-1009.

221. Arm, Ye.M., V.I. Balayev, and V.I. Pyatakhin (453). Possibility of designing a telemetry channel for well-drilling informational-measuring systems based on a fiberoptic communications line. Deposit at VINITI, no. 511-77, 14 February 1978, 27 p. (RZhRadiot, 5/78, 5Ye232)

222. Brehm, P., W. Brunke, and N. Schmechtig (NS). Simple coupling for optical waveguides. Patent GDR, no. 124332, issued 16 Fegruary 1977. (RZhRadiot, 5/78, 5Ye208)

223. Indzhiya, F.I., E.I. Krupitskiy, and V.I. Yakovlev (0). Some ways of using coherent optics and holography in commutation systems for communication channels. IN: Tr 7, 95-98. (RZhRadiot, 6/78, 6Ye224)

224. Indzhiya, F.I., E.I. Krupitskiy, and V.I. Yakovlev (0). Comparative analysis of two methods of holographic recording and reconstruction of pulsed signals, applicable to commutation and matching of ultrafast communication channels. IN: Tr 7, 99-104. (RZhRadiot, 6/78, 6Ye218)

225. Iogansen, L.V., and V.V. Malov (451). Theory of resonance tunnel coupling of optical film waveguides. ZhTF, no. 5, 1978, 997-1-04.

226. Izbinskiy, A.M., L.Z. Pososhenko, A.I. Smurygov, V.P. Sosnin, V.A. Timofeyev, and A.B. Furshchik (0). Digital data transmission channel over a fiberglass cable in an experimental automation system. Avtometriya, no. 3, 1978, 46-49.

227. Kasasent, D. (0). Coherent optical converters. IN: Sb 6, 18-41. (RZhF, 5/78, 5D1225)

228. Maciak, T. (NS). Light waves in thin-film lightguides. Elektronika [Poland], no. 11, 1977, 428-432. (RZhRadiot, 5/78, 5Ye199)

229. Mironov, Yu.M., and A.S. Semenov (1). Using gradient lightguides for matching injection lasers to optical fibers. KE, no. 6, 1978, 1237-1243.

230. Skorikov, Ye.A. (35). Stabilizing retransmitter. Author's certificate USSR, no. 557452, issued 10 August 1977. (RZhRadiot, 5/78, 5Ye238)

231. Volyar, A.V., A.V. Gnatovskiy, A.P. Loginov, N.V. Medved', and M.T. Shpak (5). Reducing the light beam divergence at the exit of a fiber bundle. UFZh, no. 5, 1978, 863-866.

232. Zolotov, Ye.M., V.A. Kiselev, V.M. Pelekhatyy, A.M. Prokhorov, V.A. Chernykh, and Ye.A. Shcherbakov (1). Study of anisotropic optical diffuse waveguides in $LiNbO_3$. KE, no. 6, 1978, 1379-1381.

B. BEAM PROPAGATION

1. In the Atmosphere

233. Agrovskiy, B.S., V.V. Vorob'yev, M.A. Kallistratova, and V.V. Shemetov (64). Numerical and experimental simulation of thermal self-action of laser beams on a path with varying velocity of medium motion. KE, no. 6, 1978, 1341-1348.

234. Arol'd, M.U., and T.P. Bernotas (131). The FEN-58 laser nephelometer. IN: Tr 8, 83-86. (RZhGeofiz, 5/78, 5B86)

235. Banakh, G.F., O.K. Voytsekhovskaya, and I.I. Ippolitov (0). Attenuation of chemical HF laser radiation in the 2.7 - 3.3 μ range in the atmosphere. OiS, v. 44, no. 6, 1978, 1192-1194.

236. Gochelashvili, K.S., and V.I. Shishov (1). Strong laser radiation intensity fluctuations in a turbulent atmosphere. Distribution function. ZhETF, v. 74, no. 6, 1978, 1974-1978.

237. Ivanov, Ye.V., and V.Ya. Korovin (0). Water droplet evaporation in a continuous CO_2 laser radiation field. Inzhenerno-fizicheskiy zhurnal, v. 34, no. 5, 1978, 807-812.

238. Los', V.V., I.L. Mikheyeva, and S.V. Sukhoterin (0). Methods for molecular spectral analysis of SO_2 in the atmosphere. IN: Sb 10, 20-23. (RZhF, 5/78, 5D1044)

239. Lukin, V.P., and I.P. Lukin (78). Propagation of modulated waves in a turbulent atmosphere. Part 2. Correlation functions and frequency spectrum of modulating oscillation phase fluctuations. KE, no. 5, 1978, 1124-1129.

240. Wendt, H. (NS). Reception and measuring device for electrooptic DME's. Patent GDR, no. 125446, issued 20 April 1977. (RZhRadiot, 6/78, 6Ye156)

241. Zakharchenko, S.V., S.M. Kolomiyets, and A.M. Skripkin (0). Breakdown of a disperse medium by laser radiation. ZhTF P, no. 24, 1977, 1338-1343. (RZhRadiot, 6/78, 6Ye177)

2. In Liquids

242. Wrembel, H.Z. (NS). Using lasers to study seawater pollution. Acta geophysica polonica, no. 2, 1977, 149-164. (RZhGeofiz, 5/78, 5V24)

3. Theory

243. Almayev, R.Kh., and P.N. Svirkunov (0). Role of laser radiation fluctuations in the bleaching of dispersed media. ZhTF P, no. 12, 1978, 719-722.

C. COMPUTER TECHNOLOGY

244. Aksel'rod, A.A., V.I. Bobrinev, V.G. Voronin, S.V. Smirnov, and I.S. Stromilov (0). Study on the reliability of information read-out in the optoelectronic channel of a holographic memory device. KE, no. 5, 1978, 995-999.

245. Angelova, L.A., A.N. Michkov, and A.F. Tikhonov (0). Apparatus to control a large capacity holographic memory. Avtometriya, no. 3, 1978, 101-103.

246. Aristov, V.V., G.A. Bashkina, Yu.P. Boglayev, V.I. Grigor'yev, and R.R. Ponomareva (0). Regularization in improvement of convolution-distorted images by means of optico-digital filtration. Avtometriya, no. 3, 1978, 110-115.

247. Bakunova, T.I., I.N. Kompanets, A.S. Levichev, P.N. Semochkin, A.V. Smolya, A.G. Sobolev, and N.B. Fel'dman (1). Transverse electrooptical effect in a matrix-addressable transparency based on lanthanum-doped lead zirconate-titanate ceramics. KE, no. 5, 1978, 1034-1042.

248. Belotitskiy, V.I., A.I. Grachev, and M.P. Petrov (0). Magnetically ordered materials in optical information processing devices. IN: Sb 6, 80-94. (RZhF, 5/78, 5D1213)

249. Besedin, A.G., and Yu.I. Khabarov (0). Information recording scheme with one-dimensional holograms using a guiding template and a liquid-crystal reference beam modulator. Avtometriya, no. 3, 1978, 66-68.

250. Skal'ski, M., F. Hoff (F. Khoff), M. Miler, et al. (0). Some results of studies of discrete units of systems for holographic information storage. Vsemirnyy elektrotekhnicheskiy kongress, Moskva, 21-25 June 1977. Sektsiya 7, Doklad 45, Moskva, 1977, 18 p. (KL, 17/78, 15791)

251. Soskin, S.I., and S.A. Shoydin (0). Parameter optimization of a holographic memory, allowing for aberration. OiS, v. 44, no. 6, 1978, 1163-1170.

252. Suynov, S.Kh., V.Kh. Suynov, and L.K. Komitov (Bulgarians). Controlled transparency based on disturbed total internal reflection of light. KE, no. 6, 1978, 1396-1398.

253. Vasil'yev, A.A., I.N. Kompanets, S.P. Kotova, and V.N. Morozov (1). Associative access in holographic memories with controlled transparencies. KE, no. 6, 1978, 1298-1304.

254. Vlasov, V.I., and D.G. Semak (136). Recording and erasing by laser light in Cu-As-Se glasses. UFZh, no. 6, 1978, 1020-1021.

D. HOLOGRAPHY

255. Alekseyev-Popov, A.V. (0). Effect of relief-phase modulation on the diffraction efficiency of thin amplitude holograms. IN: Sb 5, 27-33. (RZhF, 6/78, 6D1580)

256. Aliyeva, M.Kh., V.B. Konstantinov, A.B. Mageramov, L.G. Paritskiy, S.A. Pisarevskaya, and A.F. Rykhlov (4). Photochemical recording of holograms on InSe film surfaces. ZhNiPFiK, no. 3, 1978, 226-228.

257. Avrorin, A.V., Yu.K. Volkov, Ye.A. Kopylov, I.I. Korshever, M.I. Kotlyachkov, and V.V. Kuznetsov (0). Digital reconstruction of holographic images with a limited length of the arithmetic register. Avtometriya, no. 3, 1978, 25-27.

258. Babenko, N.K., and A.D. Kolomiyets (0). Determining the optimum exposures in noncoherent recording of holograms. IN: Sb 11, 98-100. (RZhRadiot, 5/78, 5Ye401)

259. Bekker, A.M., N.I. Bukhtoyarova, and B.G. Turukhano (0). Method for compensating the nonuniformity of a reference beam. IN: Sb 12, 107-117. (RZhF, 5/78, 5D1068)

260. Bekker, A.M. (0). Evaluating the accuracy in the modeling of a process of recording and reconstruction of holograms. IN: Sb 12, 148-160. (RZhF, 5/78, 5D1070)

261. Brekhovskikh, G.L., and A.I. Sokolovskaya (1). Magnifying the image of an object, reconstructed by dynamic holograms in nonlinear scattering media. KSpF, no. 12, 1977, 32-37. (RZhF, 6/78, 6D1573)

262. Bugayev, A.A., B.P. Zakharchenya, and F.A. Chudnovskiy (0). Reversible recording medium, FTIROS [phase transformational interference reversible reflector], for optical information imaging. IN: Sb 12, 347-364. (RZhF, 6/78, 6D1585)

263. Bukhenskiy, M.F., Ye.V. Ivakin, A.S. Rubanov, and G.V. Skrotskiy (0). Tenth All-Union Seminar on Coherent Optics and Holography. ZhPS, v. 28, no. 6, 1978, 1115-1116.

264. Bulatov, Yu.P., F.F. Gavrilov, and B.V. Shul'g[illegible] (0). Conditions for optimizing the response of silver-halide emulsions during recording of positive holograms. IN: Sb 12, 341-346. (RZhF, 6/78, 6D1575)

265. Ginzburg, V.M. (0). Pattern recognition and visual analysis. IN: Sb 12, 118-135. (RZhRadiot, 5/78, 5Ye446)

266. Gurevich, S.B., N.I. Il'yashenko, B.T. Kolomiyets, V.M. Lyubin, and V.A. Fedorov (0). Using chalcogenide glassy semiconductor films in a dual-wave regime for recording and readout of holograms. IN: Sb 6, 125-132. (RZhF, 5/-8, 5D1078)

267. Gvozdovskiy, V.T., S.I. Peredereyeva, V.M. Kozenkov, P.P. Kisilitsa, S.S. Gudzera, Yu.L. Spirin, and V.V. Magdinets (174). Hologram recording on layers of photopolymerizing oligo-urethane acrylates. ZhNiPFiK, no. 3, 1978, 230-232.

268. Ivakin, Ye.V., I.P. Petrovich, and A.S. Rubanov (3). Hologram recording method. Otkr izobr, no. 25, 1978, 397090.

269. Ivakin, Ye.V., L.V. Il'yushenko, I.P. Petrovich, and A.S. Rubanov (3). Nonstationary hologram recording and reading method. Otkr izobr, no. 25, 1978, 410687.

270. Ivakin, Ye.V., A.M. Lazaruk, I.P. Petrovich, and A.S. Rubanov (0). Amplifying dynamic holograms. ZhPS, v. 28, no. 6, 1978, 992-996.

271. Kachanov, Ye.I., and Yu.V. Yurkov (110). Problems of imitating a reference wave in acoustic holographic systems with scanning. IN: Tr 9, 84-88. (RZhRadiot, 5/78, 5Ye397)

272. Kakichashvili, Sh.D. (39). Complex n-color kinoform. UFZh, no. 6, 1978, 938-944.

273. Kakichashvili, Sh.D. (39). Polarized holograms in reflected light. ZhTF, no. 6, 1978, 1310-1311.

274. Kakichashvili, Sh.D. (0). Generalized theory of holographic polarization recording. IN: Sb 12, 32-51. (RZhF, 5/78, 5D1058)

275. Karnatovskiy, V.Ye., V.I. Nalivayko, and V.G. Tsukerman (75). Hologram recording method. Otkr izobr, no. 23, 1978, 570281.

276. Karnaukhov, V.N., N.S. Merzlyakov, N.R. Popova, and L.P. Yaroslavskiy (0). Synthesizing a kinoform. IN: Sb 12, 163-174. (RZhF, 5/78, 5D1069)

277. Karpov, V.Ye., A.K. Polonin, and V.A. Sinyayev (0). Holographic apparatus with automatic stabilization of the path difference of the interfering beams. Avtometriya, no. 3, 1978, 103-105.

278. Klyuchnikov, A.S., and N.I. Kurilo (0). Recording and reconstructing microwave holograms in a scheme with a reflecting screen. RiE, no. 5, 1978, 931-935.

279. Kolokolov, A.I. (19). Projective anisotropy of nonlinearly transformed holograms. IN: Tr 10, 74-75. (RZhRadiot, 6/78, 6Ye215)

280. Konstantinov, O.V., M.M. Panakhov, and Yu.F. Romanov (0). Theory of reflective phase arrays. OiS, v. 44, no. 5, 1978, 1016-1024.

281. Koreshev, S.N., Yu.A. Cherkasov, and I.L. Kislovskiy (0). Diffraction efficiency of photo-thermoplastic layers in the recording of discrete holograms. ZhNiPFiK, no. 3, 1978, 213-215.

282. Krupitskiy, E.I. (0). Internal problem of holography. IN: Sb 12, 21-31. (RZhF, 5/78, 5D1067)

283. Krupitskiy, E.I., and B.K. Chernov (0). Rigorous analysis of three-dimensional holographic lattices with random inclined layers. IN: Sb 12, 84-95. (RZhF, 5/78, 5D1059)

284. Lashkov, G.I., and V.I. Sukhanov (0). Use of dispersion photorefraction due to processes with the participation of triplet states to record three-dimensional phase holograms. OiS, v. 44, no. 5, 1978, 1008-1015.

285. Mikhaylov, V.P. (87). Selecting the optimum recording conditions for a holographic matching filter. IN: Tr 2, 83-85. (RZhF, 6/78, 6D1582)

286. Mustafina, L.T. (0). Method to obtain holographic interferograms. Otkr izobr, no. 21, 1978, 545170.

287. Nakhodkin, N.G., and N.G. Kuvshinskiy (0). Thermoplastic media for recording holograms. IN: Sb 6, 53-74. (RZhF, 5/78, 5D1079)

288. Nalimov, I.P., and V.D. Petrov (0). Tenth All-Union Seminar on Coherent Optics and Holography. TKiT, no. 6, 1978, 90-91.

289. Nemtinov, V.B. (0). Theoretical group model of an abstract holographic process. IN: Sb 12, 52-83. (RZhF, 5/78, 5D1056)

290. Orlova, N.G., A.S. Rubanov, and L.V. Tanin (0). "Holography-78" exhibition. ZhPS, v. 28, no. 6, 1978, 1117.

291. Ovechkis, Yu.N. (231). Fabrication of holographic screens. TKiT, no. 5, 1978, 5-58.

292. Ozols, A.O., P.A. Augustov, and K.K. Shvarts (0). Diffraction efficiency of thin holograms in the presence of multiple internal reflections. OiS, v. 44, no. 6, 1978, 1171-1179.

293. Predko, K.G. (0). Information characteristics of the objective [in holography]. IN: Sb 12, 313-325. (RZhF, 5/78, 5D1072)

294. Rovinskaya, Yu.I., N.S. Gafurova, N.A. Prosalova, V.P. Mikheyeva, I.A. Pishchulina, and A.M. Sagdeyeva (0). New photographic films for holography. IN: Sb 12, 339-340. (RZhF, 6/78, 6D1583)

295. Rukman, G.I., B.Ye. Lisyanskiy, P.A. Morozov, and S.P. Morozova (0). Holography in the IR range based on scanning image converters. IT, no. 5, 1978, 29-30.

296. Semenov, G.B., and R.R. Gerke (0). Beam reversal by holograms which reconstruct an image in reflected light. IN: Sb 5, 33-39. (RZhF, 6/78, 6D1577)

297. Shmarev, Ye.K. (0). Holographic photoplastic adder. Avtometriya, no. 3, 1978, 63-66.

298. Sidorovich, V.G., and V.V. Shkunov (0). Spectral selectivity of three-dimensional holograms. OiS, v. 44, no. 5, 1978, 1001-1007.

299. Sidorovich, V.G. (0). Theory of the conversion of optical fields by three-dimensional phase holograms. IN: Sb 5, 4-12. (RZhF, 6/78, 6D1571)

300. Skrotskiy, G.V. (0). Properties of a single-mode Gaussian beam of electromagnetic waves. IN: Sb 12, 7-20. (RZhF, 5/78, 5D1057)

301. Soyfer, V.A. (0). Reconstruction algorithms for holographic experiment data. Avtometriya, no. 3, 1978, 16-24.

302. Soyfer, V.A. (0). Digital holography: achievements and problems. IN: Sb 12, 199-226. (RZhF, 5/78, 5D1071)

303. Stepanov, S.I., A.A. Kamshilin, and M.P. Petrov (0). Characteristics of holographic recording in birefringent electrooptic crystals. IN: Sb 12, 365-377. (RZhF, 5/78, 5D1077)

304. Sturman, B.I. (75). Interaction between two light waves in crystals due to photoelectron diffusion and drift. ZhTF, no. 5, 1978, 1010-1020.

305. Sukhanov, V.I., Yu.V. Ashcheulov, A.Ye. Petnikov, and I.Ya. Mamontov (0). Study of the dynamics in the process of recording holograms on $LiNbO_3$ crystals. IN: Sb 5, 13-27. (RZhF, 6/78, 6D1581)

306. Verevkin, V.A., V.V. Dontsova, and G.A. Lenkova (0). Optical method of fabricating one-dimensional kinoforms. Avtometriya, no. 3, 1978, 71-79.

307. Vlasov, N.G., A.N. Gordeyev, Yu.P. Presnyakov, and A.Ye. Shtan'ko (0). Holography in partially coherent radiation. IN: Sb 12, 96-104. (RZhF, 5/78, 5D1073)

308. Zaytsev, V.G., and V.A. Zubov (0). Recording and processing of optical signals during photoelectric recording. IN: Sb 12, 136-147. (RZhF, 5/78, 5D1066)

309. Zinov'yev, Yu.S. (0). Problem of reconstructing the parameters of three-dimensional objects by radioholographic measurements. IN: Sb 12, 326-336. (RZhRadiot, 5/78, 5Ye388)

310. Zvonareva, T.K., B.T. Kolomiyets, V.M. Lyubin, and V.A. Fedorov (4). Photostimulated change in the optical properties and recording of optical information in glassy films of the As-S system. ZhTF, no. 5, 1978, 1021-1025.

E. LASER-INDUCED CHEMICAL REACTIONS

311. Aslanidi, Ye.B., A.B. Bakhtadze, K.V. Baiadze, R.I. Zaynullin, M.N. Kerner, and Yu.S. Turishchev (450). Separation of boron, nitrogen and carbon isotopes in a strong infrared laser field. AN GruzSSR. Soobshcheniye, v. 90, no. 3, 1978, 573-576.

312. Bazarov, Ye.N., G.A. Gerasimov, V.L. Debrov, M.A. Kovner, and S.K. Potapov (326). Orientation of a molecular gas by resonant radiation, optical rectification, and their use in laser spectroscopy. KE, no. 5, 1978, 1083-1089.

313. Burtsev, L.P., and M.O. Bulanin (0). Nonlinear absorption of IR resonance radiation by an SF_6 solution in liquid krypton. ZhTF P, no. 11, 1978, 633-635.

314. Gershenzon, Yu.M., N.M. Kuznetsov, M.G. Neygauz, B.I. Rozenfel'd, and S.K. Chekin (67). Role of chemical relaxation in the dissociation kinetics of diatomic molecules under laser excitation at low vibrational levels. Teoreticheskaya i eksperimental'naya khimiya, no. 1, 1978, 29-35.

315. Knyazev, I.N., Yu.A. Kudryavtsev, N.P. Kuz'mina, and V.S. Letokhov (72). Molecule isomerization in a multiphoton vibrational and subsequent electron excitation by laser radiation. ZhETF, v. 74, no. 6, 1978, 2017-2026.

316. Krasnoperov, L.N., N.L. Lavrik, and Yu.N. Molin (295). Photochemical reactions of chlorine initiated by argon laser radiation. KhVE, no. 3, 1978, 262-265.

317. Letokhov, V.S. (72). Selective action of laser radiation on matter. UFN, v. 125, no. 1, 1978, 57-96.

F. MEASUREMENT OF LASER PARAMETERS

318. Belogol'skiy, V.A., M.I. Kuznetsov, and M.G. Batov (140). Noise spectrum of a model-13 laser in the 200-400 kilohertz range. IN: Tr 11, 52-55. (RZhMetrolog, 5/78, 5.32.1604)

319. Blazhenkov, V.V., S.F. Kozlov, L.P. Kotenko, G.I. Merzon, and A.N. Chuzo (1). Automated system for studying the spectra of x-ray quanta, electrons and fast ions, formed in the focus of a high power laser. Fizicheskiy institut AN SSSR. Preprint, no. 202, 1977, 10 p. (RZhF, 6/78, 6D1732)

320. Borodavka, V.P., Yu.A. Klyuyev, and A.K. Tomashchik (0). Stabilizing the radiation power of a 0.63 μ He-Ne laser. IN: Sb 10, 81-84. (RZhMetrolog, 5/78, 5.32.1603)

321. Demchuk, M.I., V.F. Kaptur, V.P. Kuznetsov, V.V. Pal'skov, and K.P. Utochkin (0). Fast-response digital meter of laser pulse energy. Avtometriya, no. 3, 1978, 97-99.

322. Didyk, L.A., V.D. Kukush, O.Ye. Marykivskiy, and A.I. Teslenko (0). Device for measuring power instability of lasers. IN: Sb 13, 126-130. (RZhF, 6/78, 6D1523)

323. Gel'man, M.M., Ya.T. Zagorskiy, A.A. Kuznetsov, and A.M. Levi (0). Multichannel energy meter for laser radiation pulses. IT, no. 5, 1978, 25-26.

324. Grimblatov, V.M., A.Ya. Bekshayev, and V.V. Kalugin (240). Modulation method for measuring spatial characteristics of laser radiation. KE, no. 5, 1978, 1130-1138.

325. Korolev, F.A., N.A. Afonnikov, L.Ye. Grin', V.V. Lebedeva, and A.I. Odintsov. Ion laser frequency selection by means of an oblique Fabry-Perot etalon. OiS, v. 44, no. 6, 1978, 1143-1146.

326. Krest'yaninov, A.S., and V.V. Mityugov (94). Indirect measurement of light beam energy. IVUZ Radiofiz, no. 5, 1978, 690-697.

327. Mirzayev, As.T., Kh.Kh. Khadzhimukhamedov, and Ag.T. Mirzayev (0). Statistical characteristics of radiation in mixtures of chaotic and modulated coherent fields. DAN Uz, no. 9, 1977, 28-30. (RZhF, 6/78, 6D1152)

328. Morozov, P.A., and G.I. Rukman (0). Measurement of the spatial energetic characteristics of laser radiation in the IR range. IT, no. 5, 1978, 21-23.

329. Morozov, P.A., S.P. Morozova, T.G. Perfilova, G.I. Rukman, V.A. Sholokhov, and G.Sh. Chavuser (0). Controlling the thermal mode dynamics of laser optical channel elements. IT, no. 6, 1978, 28-29.

330. Morozova, S.P., P.A. Morozov, B.Ye. Lisyanskiy, V.A. Sholokhov, T.P. Malysheva, and T.G. Perfilova (0). Scanning analyzer of the spatial distribution of CO_2 laser radiation. IT, no. 5, 1978, 24-25.

331. Motovilovets, I.A., I.K. Senchenkov, A.M. Novikova, and S.I. Shevchenko (0). Thermoelectromotive force state of active elements in solid-state lasers. IN: Sb 14, 73-76. (RZhF, 6/78, 6D1521)

332. Troitskiy, Yu.V. (75). Optimization and comparison of the characteristics of optical interferometric discriminators. KE, no. 5, 1978, 1101-1106.

333. Vergunov, V.B., M.I. Vol'nov, and D.A. Tyurikov (1). Electronic system to stabilize the difference frequency of two lasers. PTE, no. 3, 1978, 197-198.

334. Yegorov, V.M., Ye.I. Andreychik, and A.B. Shabunya (0). Correlation meter of coherent optical sources. Otkr izobr, no. 24, 1978, 613339.

335. Zlobin, A.V., and Ya.A. Fofanov (0). Measuring radiation wavelength of a laser stabilized by saturated absorption in iodine vapor. Avtometriya, no. 3, 1978, 100-101.

G. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

336. Adrianova, I.I., V.R. Zaslavskaya, Yu.V. Popov, and G.G. Chizhikov (7). Heterodyne method of investigating surface oscillations with optical radiation at 1.06 μ. OMP, no. 5, 1978, 3-5.

337. Akhmanov, S.A., Yu.D. Golyayev, and S.V. Lantratov (2). Using lasers in modulation spectroscopy. KE, no. 6, 1978, 1329-1340.

338. Akhmedov, F.Sh. (452). Measuring the flow velocity of a liquid by means of a laser. IN: Tr 12, 128-131,143. (RZhMekh, 6/78, 6B1561)

339. Aleksandrov, Ye.B. (0). Quantum beats and laser spectroscopy. Avtometriya, no. 3, 1978, 85-94.

340. Apostol, D., P. Bachmann, and Gh. Maghiar (NS). The IH-2 system for holographic interferometry. Studii si cercetari de fizica, no. 8, 1977, 879-882. (RZhF, 6/78, 6D1587)

341. Aristov, V.V. (0). Using the principles of coherent optics in x-ray microscopy. IN: Sb 12, 299-312. (RZhF, 5/78, 5D1093)

342. Belozerov, A.F., A.N. Berezkin, L.T. Mustafina, and A.I. Razumovskaya (0). Use of a multipath holographic interferometer to visualize low density gas flows. ZhTF P, no. 9, 1978, 522-525.

343. Belozerov, A.F., and A.N. Berezkin (0). Using holographic methods in experimental aeroballistics. IN: Sb 5, 56-69. (RZhRadiot, 6/78, 6Ye220)

344. Berdanosov, V.A., V.I. Gorbunov, and A.K. Stoyanov (0). Evaluating the parameters of holographic tomosynthesis. IN: Sb 12, 227-237. (RZhF, 5/78, 5D1092)

345. Bikeyev, O.N., and S.M. Shandarov (0). New aspect of light diffraction in a lithium niobate crystal. ZhTF P, no. 19, 1977, 1023-1025. (RZhF, 5/78, 5D783)

346. Blaha, J. (NS). Dual-wave interferometric method. Strojnicky casopis, no. 6, 1977, 700-704. (RZhMekh, 6/78, 6B1576)

347. Borisov, V.F., and O.G. Ovilko (231). Phase relations in an opto-mechanical line scanning system, and raster quality. TKiT, no. 6, 1978, 22-24.

348. Boytsov, V.F. (12). Properties of ring optical resonators with a spatially inhomogeneous amplifying medium. IVUZ Radiofiz, no. 5, 1978, 682-689.

349. Bykovskiy, Yu.A., G.I. Zhuravlev, V.I. Belousov, V.M. Gladskoy, V.G. Degtyarev, and V.N. Nevolin (0). Laser mass-spectrometer method of etalon-free determination of the element composition of solid matter. Zavodskaya laboratoriya, no. 6, 1978, 701-705.

350. Chlodzinski, J., A. Dubik, S. Kaliski, J. Marczak, W. Niedzielski, and J. Owsik (NS). Picosecond diagnostics of rapidly changing processes. BAPS, no. 8, 1977, 683-689. (RZhF, 6/78, 6D1531)

351. Davydov, A.Ye., V.S. Abrukov, S.A. Abrukov, N.A. Tarasov, and F.T. Denisov (0). Investigation of the flame of a coaxial burner by holographic interferometry methods. FGiV, no. 3, 1978, 78-82.

352. Donnerhacke, K.H., D. Malz, M. Schubert, and G. Wiederhold (NS). Method and equipment for excitation of radiation spectra. Patent GDR, no. 191972, issued 13 April 1977. (RZhRadiot, 5/78, 5Ye320)

353. Dubnishchev, Yu.N., and T.Ya. Popova (193). Spatial-frequency resonances in nonlinear absorbing media. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Preprint, no. 3, 1977, 18 p. (RZhF, 6/78, 6D1548)

354. Gerasimov, I.V., K.G. Tokhadze, and V.I. Tsybulya (12). Apparatus to investigate processes behind a shock front by means of infrared absorption. PTE, no. 3, 1978, 184-188.

355. Ginzburg, V.M., L.D. Gudkov, V.M. Stepanov, and V.Ya. Tsarfin (0). Holographic apparatus to investigate ultrasonic fields in optically transparent media. Akusticheskiy zhurnal, no. 3, 1978, 420-422.

356. Gladtsin, M.M., and S.Ye. Gurov (0). Optoelectronic vibration converter based on a coordinate photo detector. IT, no. 5, 1978, 43-44.

357. Glazov, G.N., and G.M. Igonin (0). Potential accuracy of coherent Doppler measurement of a turbulent flow velocity. IVUZ Radioelektr, no. 5, 1978, 9-14.

358. Gomenyuk, A.S., V.P. Zharov, V.Ye. Zubarev, and N.V. Suyetina (24). Development of methods for laser diagnostics of gas media. IN: Tr 13, 71-79. (RZhF, 6/78, 6D1541)

359. Gurari, M.L., I.L. Khodorkov, G.I. Rukman, G.S. Potekhin, I.I. Lushchikov, and L.M. Suyedova (0). Method and apparatus for dispersion analysis of cryosalts and cryosuspensions of microimpurities in cryogenic fluids. IT, no. 5, 1978, 83-85.

360. Gusev, K.G., A.A. Kapustin, and A.A. Rassokha (0). Quantitative evaluation of holographic interferograms by means of speckle interferometry. IN: Sb 12, 267-286. (RZhF, 5/78, 5D1081)

361. Ivanov, V.Yu., and T.M. Lifshits (15). Laser magnetic photoelectric spectroscopy of epitaxial gallium arsenide films. *IAN Fiz, no. 6*, 1978, 1235-1241.

362. Ivanova, G.D., V.P. Filippov, V.I. Larchenko, Yu.P. Kurenev, and R.T. Franko (0). Holographic method for analyzing the composition of matter. IN: Sb 10, 34-43. (RZhF, 5/78, 5D1090)

363. Kharlamov, B.M., L.A. Bykovskaya, and R.I. Personov (0). New method of clarifying the line structure in inhomogeneously broadened absorption spectra of organic molecules. ZhPS, v. 28, no. 5, 1978, 839-844.

364. Khvalovskiy, V.V., S.N. Natarovskiy, and V.I. Nalivayko (30). Illuminator with a laser as light source. IVUZ Priboro, no. 6, 1978, 94-101.

365. Klimenko, I.S. (0). Principles of speckle interferometry. IN: Sb 12, 241-255. (RZhF, 5/78, 5D1080)

366. Kolerov, A.N., V.S. Mamaykin, and G.D. Petrov (140). Determination of the electron concentration of high-temperature gas flows. TVT, no. 3, 1978, 642-644.

367. Kosovskiy, L.A. (0). Acoustooptical Doppler signal simulator. IT, no. 6, 1978, 34-36.

368. Kravchenko, V.I., T.Ya. Marusiy, M.S. Soskin, V.B. Taranenko, and A.I. Khizhnyak (5). Ring laser with a holographic dispersion element. UFZh, no. 5, 1978, 866-869.

369. Krinchik, G.S., V.B. Tsvetkov, and V.P. Zolotarev (2). Magnetooptic apparatus with an amplitude digital pulse analyzer to investigate fast-flow processes. PTE, no. 3, 1978, 188-190.

370. Lariontsev, Ye.G., and V.N. Serkin (98). Mode-locking in a solid-state laser. ZhTF, no. 6, 1978, 1318-1320.

371. Lisyanskiy, B.Ye., T.P. Malysheva, P.A. Morozov, S.P. Morozova, and G.Sh. Chavuser (0). Instrument to monitor the homogeneity of optical elements. IT, no. 5, 1978, 26-28.

372. Lukin, I.P. (0). Accuracy estimate of a Doppler laser velocimeter. OiS, v. 44, no. 6, 1978, 1153-1156.

373. Lyndin, N.M., A.M. Prokhorov, A.A. Spikhal'skiy, V.A. Sychugov, A.V. Tishchenko, and G.P. Shipulo (1). Experimental determination of the effective thickness of diffusion waveguides. KE, no. 6, 1978, 1323-1328.

374. Malykhin, V.A., and Yu.N. Khomyakov (0). Acoustoholographic turbulence recorder. IN: Sb 15, 88-91. (RZhMekh, 6/78, 6B1572)

375. Merzlyakov, N.S. (0). Methods of digital synthesis of elements of coherent optical devices for signal processing. IN: Sb 12, 175-186. (RZhF, 5/78, 5D1094)

376. Mochalov, A.V. (110). Compensation-type laser gyroscope. IN: Tr 14, 133-135. (RZhF, 6/78, 6D1562)

377. Mustafina, L.T., N.P. Kutikova, and T.M. Babayeva (0). Holographic interferometer. Otkr izobr, no. 21, 1978, 575910.

378. Obraztsov, V.S., and D.N. Sitnik (0). Analyzing the possibilities of detecting defects in the casting of hollow turbine blades, by means of holographic interferometry. IN: Sb 5, 69-81. (RZhRadiot, 6/78, 6Ye223)

379. Petru, F. (NS). Survey of the instrument development in the Quantum Electronics Division at the Institute of Scientific Instruments, Czechoslovak Academy of Sciences, Brno. Optica applicata [Poland], no. 1, 1977, 27-30. (RZhF, 5/78, 5D915)

380. Petru, F. (NS). Laser measurement system with approximately circularly polarized light. Optica applicata [Poland], no. 3, 1977, 85-96. (RZhRadiot, 6/78, 6Ye152)

381. Piskareva, M.V., and F.V. Shugayev (2). Passage of a shock wave through an inhomogeneous region of a gas with temperature distribution or component concentration distribution. VMU, no. 3, 1978, 11-18.

382. Popela, B., and M. Veit (NS). Circuit for automatic compensation of the direct-current components of a laser interferometer signal. Patent Czechoslovakia, no. 167731, issued 15 February 1977. (RZhRadiot, 6/78, 6Ye202)

383. Popov, Yu.N. (0). Measurement of transparent plate thickness. PTE, no. 3, 1978, 237-238.

384. Prigorovskiy, N.I., and N.S. Cherpakova (0). Holography methods in mechanical tests (survey). Zavodskaya laboratoriya, no. 6, 1978, 726-739.

385. Quillfeldt, W. (NS). Attachment for reducing the contamination of a focusing objective by material vapor. Patent GDR, no. 125703, issued 11 May 1977. (RZhRadiot, 5/78, 5Ye309)

386. Rebigan, S.N. (NS). Three-beam holographic interferometry. Studii si cercetari de fizica, no. 6, 1977, 539-548. (RZhF, 5/78, 5D1091)

387. Rokos, I.A., and L.A. Rokosova (140). Optical logic unit based on a Michelson interferometer. Otkr izobr, no. 21, 1978, 497942.

388. Romashkov, A.P. (0). Metrological implementation of pulse photometry in the IR range of laser radiation. IT, no. 5, 1978, 30-31.

389. Rusbueldt, D., and A. Elbern (NS). Density measurement of sputtered metals by fluorescence spectroscopy. IN: Sb 2, 157-158. (RZhF, 5/78, 5D762)

390. Sayauskas, S. (0). Laser instrument for measuring ultrasonic vibrations. IN: Tr 15, 112-115. (RZhF, 5/78, 5D1053)

391. Seleznev, V.G. (0). Holographic interferometry and coherent optics in the study of the vibrations of diffusely reflecting objects. IN: Sb 12, 287-296. (RZhF, 5/78, 5D1082)

392. Seleznev, V.G. (0). Determining the deformations in the edges of compressor blades from their holographic interferograms. IN: Sb 5, 81-86. (RZhRadiot, 6/78, 6Ye222)

393. Sergeyev, P.A., and V.N. Sintsov (7). Investigation of a holographic method to measure two-dimensional lens transfer functions. OMP, no. 5, 1978, 12-15.

394. Shchelokov, R.N., A.Yu. Tsivadze, G.S. Muraveyskaya, and T.N. Leonova (0). Raman spectra of platinum glycine complexes. Zhurnal neorganicheskoy khimii, no. 12, 1977, 3303-3311. (RZhF, 6/78, 6D544)

395. Sinitsa, L.N. (0). Absorption spectrum of C_2H_2 in the neodymium laser range. OiS, v. 44, no. 6, 1978, 1099-1103.

396. Smekhov, G.D., and V.A. Fotiyev (0). Investigation of the population kinetics of excited argon levels in a recombining plasma. MZhiG, no. 3, 1978, 117-122.

397. Vcherashniy, R.I., and P.I. Saydov (110). Mechanical modeling of quantum gyroscopes. IN: Tr 14, 85-88. (RZhF, 6/78, 6D1563)

398. Vlasov, B.I., V.K. Rusakov, and I.A. Yurova (140). New instrument to determine ephemeris time: the solar quantum altimeter. IN: Tr 16, 43-49. (RZhRadiot, 6/78, 6Ye207)

399. Vlasov, N.G., and A.Ye. Shtan'ko (0). What's new in speckle interferometry. IN: Sb 12, 256-266. (RZhF, 5/78, 5D1083)

400. Vodzinskiy, A.I., V.A. Soyfer, and A.G. Khramov (0). Using digital holography to study spatial assemblies of particles. IN: Sb 12, 187-198. (RZhF, 5/78, 5D1095)

401. Voytovich, A.P., and V.I. Sardyko (3). Properties of ring lasers containing optical elements with a magnetic circular dichroism. KE, no. 5, 1978, 965-972.

402. Yankovskiy, A.A. (0). Seminar on atomic spectrum analysis using lasers. ZhPS, v. 28, no. 6, 1978, 1120-1121

403. Yesepkina, N.A., B.A. Kotov, Yu.A. Kotov, A.V. Mikhailov, V.Yu. Petrun'kin, and S.V. Pruss-Zhukovskiy (0). Hybrid optico-digital system for spectrum analysis of radio signals. Avtometriya, no. 3, 1978, 50-54.

404. Zastrogin, Yu.F., and V.R. Belevitnev (0). Laser measuring instruments at the "Metrologiya-77" exhibition in Moscow. Pribory i sistemy upravleniya, no. 1, 1978, 59-61. (RZhF, 6/78, 6D1540)

405. Zborovskiy, V.A., Ye.A. Tiunov, and E.Ye. Fradkin (12). Theory of nonlinear interaction of opposed waves of arbitrary polarization in gas ring lasers. IVUZ Radiofiz, no. 6, 1978, 816-828.

406. Zhilkin, A.M., and V.D. Vasil'yev (7). Contactless optoelectronic position converters. OMP, no. 6, 1978, 58-64.

407. Zhulanov, Yu.V., I.V. Petryanov, and B.F. Sadovskiy (122). Laser photoelectric spectrometer of large condensation nuclei. FAiO, no. 5, 1978, 520-526.

408. Zitnik, J. (NS). Measuring small luminous fluxes. Obzornik za matematiko in fiziko [Slovenian], no. 6, 1977, 208-213. (RZhF, 5/78, 5D1165)

409. Zlenko, A.A., V.N. Sorokovikov, V.A. Sychugov, and G.P. Shipulo (1). Diffraction method for measuring the refractive index at the surface of a material. KE, no. 6, 1978, 1318-1322.

2. Laser-Excited Optical Effects

410. Abdullayev, G.B., G.I. Abutalybov, E.Yu. Salayev, M.A. Sobeikh, V.I. Tagirov, and V.M. Salmanov (0). Resonance emission from TlSe in a continuous spectral region. AN AzSSR. Doklady, no. 6, 1977, 13-15. (RZhF, 6/78, 6Ye1669)

411. Arakelyan, V.S., A.G. Avetisyan, E.G. Mirzabekyan, and F.M. Shaverdyan (264). Observation of the effect of "freezing" an ultrasonic wave. ZhETF P, v. 27, no. 11, 1978, 656-657.

412. Baltrameyunas, R., Yu. Vaitkus, M.V. Kurik, V. Narkyavichyus, and V. Nyunka (49,5). Luminescence of anthracene single crystals with pentacene and tetracene impurities, excited by a laser pulse. Litovskiy fizicheskiy zhurnal, no. 3, 1978, 361-364.

413. Belyakov, L.V., D.N. Goryachev, L.G. Paritskiy, and O.M. Sreseli (4). Photoresponse of copper-doped gallium arsenide. FTP, no. 6, 1978, 1226-1228.

414. Belyayev, V.A., Yu.F. Biryulin, A.D. Bondarev, Ye.I. Leonov, and Yu.V. Shmartsev (0). Photoluminescence in Nd-doped $Bi_{12}SiO_{20}$ single crystals. ZhTF P, no. 23, 1977, 1246-1250. (RZhF, 5/78, 5D739)

415. Blagov, M.I., V.A. Murashova, G.S. Pashchenko, T.I. Syreyshchikova, R.G. Khazizov, L.Ye. Shubin, and M.N. Yakimenko (1). Device for recording secondary emission induced by a pulsed laser. Fizicheskiy institut AN SSSR. Preprint, no. 125, 1977, 8 p. (RZhF, 6/78, 6D1466)

416. Blaszczak, Z. (NS). Study of the temperature dependence of an optical Kerr effect in a critical solution of nitrobenzene in hexane. FDiR, no. 2, 1977, 193-198. (RZhF, 6/78, 6D1148)

417. Borovik-Romanov, A.S., V.G. Zhotikov, and N.M. Kreynes (65). Light scattering by spin waves of the low-frequency spectrum branch in weakly ferromagnetic $CoCO_3$. ZhETF, v. 74, no. 6, 1978, 2286-2299.

418. Borshch, A.A., M.S. Brodin, and N.N. Krupa (5). Dynamics of self-action of neodymium laser emission in semiconductors of the $A^{II}B^{VI}$ group. KE, no. 5, 1978, 1095-1100.

419. Brodin, M.S., D.B. Goer, and M.G. Matsko (5). Relaxation processes and features of the radiation spectra of ZnTe and $Zn_xCd_{1-x}Te$ crystals. ZhETF, v. 74, no. 6, 1978, 2088-2096.

420. Budkin, L.A., V.G. Boldin, and A.I. Pikhtelev (0). Atom-beam tube with laser pumping and display. IVUZ Radiofiz, no. 5, 1978, 673-681.

421. Denisov, V.N., V.B. Podobedov, A.M. Pyndyk, and Kh.E. Sterin (0). Kinetic investigations of the distribution function in excited nitrogen, using Raman scattering. ZhETF P, v. 27, no. 12, 1978, 681-684.

422. Dorofeyev, V.G., V.A. Kareva, V.S. Makin, and V.N. Smirnov (7). Absorption of KRS-5 and KRS-6 crystals in the 10.6 μ region. OMP, no. 6, 1978, 35-36.

423. Godik, E.E., A.I. Kuznetsov, and V.P. Sinis (15). Impurity photoconductivity of germanium with quantum energies less than the impurity ionization energy. IAN Fiz, no. 6, 1978, 1208-1212.

424. Gorelik, V.S., G.G. Mitin, and Yu.N. Polivanov (1). Polariton light scattering spectra in the zone of dissociated crystal states. Kristal, no. 3, 1978, 561-565.

425. Kaminskiy, A.S., N.V. Alkeyev, G.I. Voronkova, and Ya.Ye. Pokrovskiy (15,95). Luminescence of multiparticle exciton-impurity complexes in silicon and its utilization to determine the impurity composition. IAN Fiz, no. 6, 1978, 1170-1174.

426. Kanayev, I.F., V.K. Malinovskiy, and B.I. Sturman (75). Induced reflection and bleaching effects in electrooptical crystals. ZhETF, v. 74, no. 5, 1978, 1599-1604.

427. Karlov, N.V., B.B. Krynetskiy, and O.M. Stel'makh (1). Excitation of higher levels of a lithium atom under the action of resonance radiation. KSpF, no. 12, 1977, 17-21. (RZhF, 6/78, 6D1469)

428. Karnatovskiy, V.Ye., and V.G. Tsukerman (75). Induced anisotropy in vitreous material in an As-S system. XE, no. 6, 1978, 1394-1395.

429. Katyrin, V.V., N.N. Sibel'din, V.B. Stopachinskiy, and V.A. Tsvetkov (1). Size distribution of electron-hole droplets in germanium under internal pulse excitation. FTT, no. 5, 1978, 1426-1432.

430. Kielich, S., R. Zawodny, and H. Sitarz (NS). Nonlinear variation in the refractive index of crystals, induced by intense laser radiation. FDiR, no. 1, 1977, 129-138. (RZhF, 5/78, 5D866)

431. Kolomiyets, B.T., V.M. Lyubin, and V.P. Shilo (4). Photostimulated changes in chalcogenide glass solubility. Fizika i khimiya stekla, no. 3, 1978, 351-357.

432. Kulish, N.R., M.P. Lisitsa, A.F. Maznichenko, and B.M. Bulakh (6). Saturation of optical absorption in CdSe. FTP, no. 5, 1978, 987-990.

433. Nasyrov, U. (454). Two-photon absorption spectrum of crystalline and glassy As_2S_3. FTP, no. 6, 1978, 1210-1212.

434. Orlova, N.D., and L.A. Pozdnyakova (0). Raman scattering spectrum of liquid methane and its solutions in N_2 and Ar in the 83-180 K temperature range. OiS, v. 44, no. 5, 1978, 924-931.

435. Salo, L.A., V.S. Gerasimenko, I.V. Galagovets, Ye.Yu. Peresh, and V.Yu. Slivka (136). Vibrational spectra of single-crystal and glassy $PbGeS_3$. UFZh, no. 6, 1978, 1033-1035.

436. Samartsev, V.V., R.G. Usmanov, G.M. Yershov, and B.Sh. Khamidullin (38). Effects of optical echo lead and lag signals. ZhETF, v. 74, no. 6, 1978, 1979-1987.

437. Shtyrkov, Ye.I., V.S. Lobkov, and N.G. Yarmukhametov (0). Induced lattice formed in a ruby by the interference between atomic states. ZhETF P, v. 27, no. 12, 1978, 685-688.

438. Shvarev, K.M., V.S. Gushchin, and B.A. Baum (42). Effect of temperature on the optical constants of iron. TVT, no. 3, 1978, 520-525.

439. Ustinov, N.D., P.A. Bakut, V.V. Barinov, L.A. Devyatkov, V.I. Mandrosov, and I.N. Troitskiy (0). Analysis of the quality of laser images from diffuse objects. KE, no. 6, 1978, 1257-1262.

440. Vakulenko, O.V., and B.M. Shutov (51). Thermally stimulated luminescence in silicon carbide from optical excitation of crystals in the improper absorption domain. FTP, no. 5, 1978, 1013-1016.

441. Vargin, A.N., V.V. Gogokhiya, V.K. Konyukhov, A.I. Lukovnikov, and L.M. Pasynkova (1). Density fluctuations in a layer of adsorbed CO_2 molecules on an ion crystal surface. ZhTF, no. 6, 1978, 1249-1256.

442. Voronkov, V.V., T.M. Murina, G.I. Voronkova, B.V. Zubov, V.P. Kalinushkin, B.B. Krynetskiy, and A.M. Prokhorov (1). Influence of photoexcitation on light scattering by pure germanium single crystals. FTT, no. 5, 1978, 1365-1368.

443. Vorozheykina, L.F., V.V. Mumladze, and T.G. Khulordava (0). Color center transformation in NACl crystals. OiS, v. 44, no. 5, 1978, 938-941.

444. Wojtczak, J., A. Masiejewski, M. Szymanski, and Z. Stryla (NS). Laser device for studying the dynamics of optical absorption and fluorescence signals. Optica applicata [Poland], no. 3, 1977, 111-114. (RZhRadiot, 6/78, 6Ye181)

445. Yakovlenko, S.I. (23). Resonance excitation and ionization of an atom by a laser pulse. Institut atomnoy energii. Preprint, IAE-2824, 1977, 23 p. (KL, 20/78, 18776)

446. Yershov, L.S., and V.Yu. Zalesskiy (0). $I(5^2P_{1-2} - 5^2P_{3/2})$ collision-initiated radiation transition. KE, no. 5, 1978, 1139-1141.

447. Yes'kin, V.A., and N.K. Sidorov (0). Investigation of the concentration dependence of the Raman scattering line intensity in solutions at low concentrations. OiS, v. 44, no. 6, 1978, 1210-1212.

448. Zakharchenya, B.P., and V.G. Fleysher (4). Optical orientation and cooling of spin systems in semiconductors. Priroda, no. 5, 1978, 56-57.

449. Zelenchuk, A.R. (7). Compensation of the "constant" component in optical heterodyning. OMP, no. 5, 1978, 15-17.

H. BEAM-TARGET INTERACTION

1. Metal Targets

450. Arifov, U.A., V.B. Lugovskoy, and V.A. Makarenko (202). "Hot" electron emission from metals subjected to microsecond laser pulses. FTT, no. 5, 1978, 1505-1510.

451. Bugayev, A.A., A.I. Gavrilyuk, A.A. Gur'yanov, B.P. Zakharchenya, and F.A. Chudnovskiy (0). Metastable metal phase in VO_2 films. ZhTF P, no. 2, 1978, 62-69. (RZhF, 6/78, 6Ye1107)

452. Bykovskiy, Yu.A., V.M. Boyakov, V.T. Galochkin, A.S. Molchanov, I.N. Nikolayev, and A.N. Orayevskiy (16,1). Deposition of metal, semiconductor, and oxide films by means of a pulse-train CO_2 laser. ZhTF, no. 5, 1978, 991-996.

453. Gazuko, I.V., I.M. Gryaznov, and L.I. Mirkin (248). Lag in brittle material rupture subjected to a laser beam. DAN SSSR, v. 240, no. 1, 1978, 70-71.

454. Ivanov, L.I., N.A. Litvinova, and V.A. Yanushkevich (0). Laws governing shock formation from the effect of laser radiation on absorbing solids. Problemy prochnosti, no. 6, 1978, 99-101.

455. Kiseleva, K.L., Ye.P. Semenov, and Ye.M. Yudintsev (7). Effect of pulsed CO_2 laser focusing conditions on development of optical gas breakdown near metal surfaces. OMP, no. 6, 1978, 15-17.

456. Kovalenko, V.S., and L.F. Golovko (0). Analysis of technological characteristics of laser hardening of structural materials. EOM, no. 3, 1978, 25-27.

457. Kovalenko, V.S., and V.I. Volgin (0). Characteristics of laser alloying of an iron surface with vanadium. FiKhOM, no. 3, 1978, 28-30.

458. Lazarenko, B.R., V.V. Mikhaylov, A.Ye. Gitlevich, A.A. Yeliseyev, and V.I. Volgin (0). Laser action on coatings obtained by the method of electric spark alloying. EOM, no. 3, 1978, 24-25.

459. Orekhov, M.V., A.A. Uglov, and T.N. Sokolova (0). Target destruction under oblique incidence of laser radiation on its surface. FiKhOM, no. 3, 1978, 159.

460. Uglov, A.A., and A.L. Galiyev (0). Laser beam action on a moving target in a high pressure gas atmosphere. FiKhOM, no. 3, 1978, 23-27.

2. Dielectric Targets

461. Kovalev, A.A., and B.I. Makshantsev (0). Surface damage to solid transparent dielectrics by laser radiation. KE, no. 5, 1978, 1151-1154.

462. Leonov, R.K., S.I. Zakharov, I.A. Dmitriyeva, and G.M. Gandel'man (141). Methods of investigating the role of absorbing microparticles in laser damage to transparent dielectrics. Part 1. Passive methods. KE, no. 6, 1978, 1279-1290.

463. Lysikov, Yu.I. (0). Role of thermal stresses in the optical breakdown of transparent dielectrics. FiKhOM, no. 3, 1978, 31-36.

464. Sokolovskiy, R.I., and Ye.L. Tyurin (152). Intense radiation absorption in a transparent dielectric containing a microimpurity. IVUZ Fiz, no. 6, 1978, 90-95.

465. Weise, V.H., and D. Schaefer (NS). Raster electron microscopic study of the destruction of laser mirrors. Experimentalle Technik der Physik, no. 6, 1977, 567-569. (RZhF, 6/78, 6D1489)

3. Semiconductor Targets

466. Mazhukin, V.I., and M.D. Taran (71). Numerical solution for a nonstationary two-dimensional problem of laser heating of matter. Institut prikladnoy matematiki AN SSSR. Preprint, no. 9, 1978, 13 p. (RZhF, 5/78, 5D1015)

4. Miscellaneous Studies

467. Artyushenko, V.G., Ye.M. Dianov, and Ye.P. Nikitin (1). Calorimetric method for determining volume and surface absorption in materials which are transparent in the IR region. KE, no. 5, 1978, 1065-1071.

468. Arzuov, M.I., A.I. Barchukov, M.Ye. Karasev, V.I. Konov, V.V. Kostin, S.M. Metev, and N.I. Chapliyev (0). Low-threshold breakdown of gases by pulsed periodic CO_2 laser radiation near targets. ZhTF P, no. 23, 1977, 1291-1295. (RZhF, 6/78, 6D1461)

469. Darvoyd, T.I., V.I. Kovalev, I.S. Lisitskiy, V.S. Mironov, and F.S. Fayzullov (1). Study of the resistance of KRS-6 and KRS-5 crystals to pulsed CO_2 laser radiation. KE, no. 5, 1978, 1043-1047.

470. Derzhiyev, V.I., A.A. Filyukov, and V.Yu. Zakharov (0). Multicomponent plasma expansion in a vacuum. IN: Sb 1, 891-892. (RZhF, 6/78, 6G355)

471. Kytina, I.G., and A.S. Obukhov (0). Method to determine the damage threshold of optical materials. Otkr izobr, no. 26, 1978, 615358.

472. Pozdnyakov, A.Ye. (0). Method of combining the light of several lasers. PTE, no. 3, 1978, 198-199.

473. Vol'ter, V.G., and A.N. Sviridov (7). Pulsed low pressure CO_2 laser and its use to scribe sitall plates. OMP, no. 6, 1978, 44-46.

J. PLASMA GENERATION AND DIAGNOSTICS

474. Apostol, D., I. Apostol, E. Cojocanu, V.I. Konou, V. Draganescu, I.N. Mihailescu, and I. Monjan (NS). Interferometric investigation of shock waves induced by a laser-produced plasma. IN: Sb 1, 895-896. (RZhF, 6/78, 6G250)

475. Asanaliyev, M.K., Zh.Zh. Zheyenbayev, M.A. Samsonov, and V.S. Engel'sht (0). Measurement of solid particle acceleration in a plasma flux. FiKhOM, no. 3, 1978, 65-71.

476. Baranowski, A., Z. Mucha, and Z. Peradzynski (NS). Thermogasdynamic instability of continuous optical discharge. IN: Sb 1, 901-902. (RZhF, 6/78, 6G542)

477. Basov, N.G. (1). Status, prospects, and problems of laser fusion in the power of the future. Priroda, no. 6, 1978, 26-37.

478. Boyko, V.A., S.A. Pikuz, A.S. Safronova, and A.Ya. Fayenov (0). Transitions between the configurations $1s^2 2s^2 2p^5$-$1s^2 2s^2 2p^4 3d$ and $1s^2 2s^2 2p^5$-$1s^2 2s^2 2p^4 3s$ in spectra of the ions FeXVIII-ZnXXII, GeXXIV and SeXXVI. OiS, v. 44, no. 5, 1978, 840-844.

479. Brodskiy, Yu.Ya., V.L. Gol'tsman, V.A. Mironov, and S.I. Nechuyev (426). Experimental investigation of electromagnetic field interaction with a plasma layer. ZhETF, v. 74, no. 5, 1978, 1636-1649.

480. Brodskiy, Yu.Ya., V.L. Gol'tsman, A.G. Litvak, and S.I. Nechuyev (0). Plasma heating by electromagnetic waves. IN: Sb 1, 809-810. (RZhRadiot, 5/78, 5Ye347)

481. Burmasov, V.S., L.N. Vyacheslavov, V.A. Kornilov, E.P. Kruglyakov, A.A. Podyminogin, and G.I. Shul'zhenko (0). Interaction of a relativistic e-beam with a plasma in a strong magnetic field. IN: Sb 1, 909-910. (RZhF, 6/78, 6G225)

482. Burmasov, V.S., E.P. Kruglyakov, and A.A. Podyminogin (79). Michelson interferometer with a CO_2 laser for measuring plasma density. Institut yadernoy fiziki SOAN. Preprint, no. 29, 1977, 10 p. (RZhF, 6/78, 6D1752)

483. Burtsev, V.A., G.A. Grad, V.D. Dyatlov, A.S. Smirnov, Yu.F. Teplov, and V.P. Fedyakov (0). Target systems in multichannel laser thermonuclear devices. IN: Sb 4, 128-136. (RZhF, 6/78, 6F340)

484. Bychenkov, V.Yu., V.P. Silin, and V.T. Tikhonchuk (O). Parametric absorption of high-power laser radiation in a turbulent plasma. IN: Sb 16, 24-26. (RZhMekh, 6/78, 6B391)

485. Cibin, P.K. [Cyrillic spelling not given] (O). Propagation of electromagnetic surface waves along a plasma column in the presence of losses. IN: Sb 1, 793-794. (RZhRadiot, 5/78, 5Ye348)

486. Denus, S., A. Kasperczuk, M. Paduch, L. Pokora, and Z. Wereszczynski (NS). Multi-frame interferometric setup for studying quick-change processes. Journal of Technical Physics [Poland], no. 4, 1977, 395-405. (RZhF, 6/78, 6G609)

487. Gets, K., Yu.A. Mikhailov, S.A. Pikuz, G.V. Sklizkov, A.Ya. Fayenov, S.I. Fedotov, E. Ferster, and P. Tsaumzayl' (1). Application of high-quality crystals for x-ray spectroscopic diagnostics of a laser plasma. PTE, no. 3, 1978, 201-207.

488. Glukhikh, V.A., O.A. Gusev, I.F. Malyshev, M.P. Svin'in, O.P. Pecherskiy, A.S. Ivanov, G.M. Latmanizova, O.B. Ovchinnikov, Ye.M. Mellekh, A.S. Perlin, V.I. Chetvertkov, Yu.A. Istomin, A.P. Safronenko, P.G. Peruchev, Ye.P. Pavlov, V.D. Fedorov, T.K. Vasil'yeva, V.B. Markov, and B.N. Il'in (O). Using high-current electron accelerators and lasers in thermonuclear devices. IN: Sb 4, 85-92. (RZhF, 6/78, 6G407)

489. Grigor'yants, R.R., A.V. Kalinin, O.N. Krokhin, V.B. Rozanov, G.V. Sklizkov, Ye.M. Shelkov, and E.E. Shpil'rayn (0). Energy aspects of prospective laser thermonuclear power stations. IN: Sb 4, 153-160. (RZhF, 6/78, 6G341)

490. Guendel, H., W. Kabel, and K. Seliger (NS). Breakdown of large-area nanosecond discharges. IN: Sb 1, 619-620. (RZhF, 6/78, 6G653)

491. Helbig, V., B. Lewandowski, and D. Vikicevic (NS). Interferometric measurement of the electron density in an arc plasma. IN: Sb 2, 173-177. (RZhF, 5/78, 5G339)

492. Holzhauer, E. (NS). Scattering at 10.6 μ from thermal plasma fluctuations to determine the ion temperature using light mixing. IN: Sb 2, 183-184. (RZhF, 5/78, 5G347)

493. Kaliski, S. (NS). Using CO_2 lasers for compressive fusion of a plasma in D-T macrosamples. BWAT, no. 11, 1977, 89-98. (RZhRadiot, 6/78, 6Ye204)

494. Kiselevskiy, L.I., and G.S. Antonov (0). The outflow of laser-produced plasma from thin capillaries. IN: Sb 1, 897-898. (RZhF, 6/78, 6G540)

495. Kozlov, G.I. (0). Laser plasmatron with a gas channel. ZhTF P, no. 10, 1978, 586-589.

496. Krokhin, O.N., A.S. Shikanov, G.V. Sklizkov, and Yu.A. Zakharenkov (0). Fast ions from a laser plasma. IN: Sb 1, 883. (RZhF, 6/78, 6G623)

497. Kurbatov, A.A., T.Ya. Popova, and N.G. Preobrazhenskiy (0). Magnetic field effect upon maintenance of continuous optical discharge in gases. IN: Sb 1, 899-900. (RZhF, 6/78, 6G541)

498. Kutukov, V.B. (0). Low-threshold breakdown mechanism of a weakly ionized gas by optical radiation. ZhTF P, no. 10, 1978, 619.

499. Lowke, J.J. (NS). Properties of electrical discharges sustained by a uniform source of ionization. IN: Sb 1, 601-602. (RZhF, 6/78, 6G649)

500. Malz, D., and K. Vogler (NS). Removal of material and excitation of plasma during irradiation of solid-state targets by CO_2 TEA laser radiation. Part 2. Emission spectroscopy of the plasma. Experimentalle Technik der Physik, no. 6, 1977, 555-566. (RZhF, 5/78, 5D991)

501. Margolin, L.Ya., and L.N. Pyatnitskiy (0). Low-temperature plasma diagnostics by scattering and resonance fluorescence. IN: Sb 2, 187-188. (RZhF, 6/78, 6G606)

502. Motylev, S.L., and P.P. Pashinin (1). Experimental investigation of spontaneous magnetic fields in laser plasma. KE, no. 6, 1978, 1230-1236.

503. Mukhamedgaliyeva, A.F., G.L. Vasil'yeva, M.S. Gasoyan, and G.K. Tyutneva (0). Spectroscopic investigation of a laser flare on the surface of fused quartz and silica-containing minerals. ZhPS, v. 28, no. 5, 1978, 903-905.

504. Pilipetskiy, N.F., V.I. Popovichev, and V.V. Ragul'skiy (0). Concentrating light by inverting its wave front. ZhETF P, v. 27, no. 11, 1978, 619-622.

505. Platisa, M., and N. Konjevic (NS). Stark broadening of Ne(II) lines. IN: Sb 2, 121-122. (RZhF, 5/78, 5G55)

506. Ross, W., S. Florek, and J. Gatzke (NS). Investigation of some processes in a hydrogen laser plasma. IN: Sb 1, 633-634. (RZhF, 6/78, 6G659)

507. Rusbueldt, D., and M. Schlott (NS). Experimental determination of electron densities by 90° collective scattering of CO_2 laser light. IN: Sb 2, 191-192. (RZhF, 5/78, 5G346)

508. Tishchenko, Ye.A., V.V. Zav'yalov, V.G. Zatsepin, and V.B. Lazarev (0). Measurement of the complex transmission coefficient in submillimeter diagnostics of a moving plasma filament by a converging wave beam. IN: Sb 2, 161-162. (RZhF, 5/78, 5G342)

509. Velikotskiy, V.L., G.I. Kozin, A.S. Savelov, and Ye.D. Protsenko (0). Using a two-mode He-Ne laser to determine the electron concentration of a pulsed plasma. IN: Sb 16, 132. (RZhMekh, 5/78, 5B409)

510. Veretennikov, V.A., V.A. Gribkov, A.V. Dubrovskiy, A.I. Isakov, N.V. Kalachev, T.A. Kozlova, O.N. Krokhin, V.Ya. Nikulin, O.G. Semenov, and G.V. Sklizkov (0). The "Flora" system: possibilities of developing a pulsed neutron source on the basis of combined laser -- relativistic e-beam plasma heating. IN: Sb 1, 881-882. (RZhF, 6/78, 6G354)

511. Vinogradov, A.V., G.V. Peregudov, Ye.N. Ragozin, I.Yu. Skobelev, and Ye.A. Yukov (1). Dependence of the spectrum of oxygen-like ions on the electron density in a laser plasma. KE, no. 5, 1978, 1077-1082.

512. Yerokhin, A.A., Yu.A. Zakharenkov, N.N. Zorev, G.V. Sklizkov, and A.S. Shikanov (1). Hypervelocity diagnostics of shock waves in a laser beam. Fizika plazmy, no. 3, 1978, 648-661.

513. Yerokhin, A.N., and V.P. Silin (1). Anomalous absorption of high-power laser radiation by a plasma. KSpF, no. 12, 1977, 42-46. (RZhRadiot, 5/78, 5Ye352)

514. Yevseyenko, V.P., V.Ye. Mitsuk, and V.A. Chernikov (0). Gas breakdown by laser radiation at high pressures. IN: Sb 1, 905-906. (RZhF, 6/78, 6G544)

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

515. Denisyuk, Yu.N., and Yu.I. Ostrovskiy, eds. (O). Opticheskaya golografiya i yeye primeneniya (Optical holography and its applications). Leningrad, Nauka, 1977, 98 p. (RZhF, 6/78, 6D1570)

516. Gubanov, B.S., A.B. Dremin, A.I. Drobyshev, V.Ya. Zel'chenko, A.A. Kapustin, I.Yu. Krivtsov, V.V. Pavlov, V.M. Selivanov, A.B. Tarasov, K.V. Tyufyayev, Ye.I. Khlypalo, and S.N. Sharov (O). Lazery i nekotoryye voprosy ikh primeneniya (Lasers and some problems of their application). Leningrad, Sudostroyeniye, 1977, 219 p. (RZhF, 6/78, 6D1358)

517. Gurevich, S.B., ed. (O). Prostranstvennyye modulyatory sveta (Spatial modulators of light). Leningrad, Nauka, 1977, 143 p. (RZhRadiot, 5/78, 5Ye142)

518. XIIIth International Conference on Phenomena in Ionized Gases, Berlin, 12-17 September 1977. Proceedings. Contributed Papers. Part 1. Leipzig, 1977, 450 p. (RZhF, 5/78, 5G1)

519. XIIIth International Conference on Phenomena in Ionized Gases, Berlin, 12-17 September 1977. Proceedings. Contributed Papers. Part 2. Leipzig, 1977, pp 451-920. (RZhF, 6/78, 6G1)

520. Letokhov, V.S. (German spelling: Letochow, W.S.)(O). Laserspektroskopie (Laser spectroscopy). Berlin, Akademie Verlag, 1977, 211 p. (RZhF, 6/78, 6D1356)

521. Marshak, I.S., A.S. Doynikov, V.P. Zhil'tsov, L.I. Shchukin, and M.G. Feygenbaum (O). Impul'snyye istochniki sveta (Pulsed light sources). Moskva, Energiya, 1978, 472 p. (RZhF, 6/78, 6D1795)

522. Svet, V.D. (O). Metody akusticheskoy golografii (Methods in acoustic holography). Leningrad, TsNII "Rumb", 1976, 129 p. (KLDV, 6/78, 6128)

523. Vakhidov, Sh.A., E.M. Ibragimova, B. Kaipov, et al. (85). Radiatsionnyye yavleniya v nekotorykh lazernykh kristallakh (Radiation phenomena in various laser crystals). Tashkent, Fan, 1977, 152 p. (KL, 17/78, 15559)

524. Vsesoyuznaya konferentsiya po inzhenernym problemam termoyadernykh reaktorov, Leningrad, 28-30 iyunya 1977 g. Doklady (All-Union Conference on Engineering Problems of Thermonuclear Reactors, Leningrad, 28-30 June 1977. Reports). Leningrad, 1977, in three volumes, v. 1, 297 p., v. 2, 320 p., v. 3, 373 p. (RZhF, 6/78, 6G373)

525. IX Vsesoyuznaya shkola po golografii, Tbilisi, 24-29 yanv. 1977 g. Materialy (Ninth All-Union Seminar on Holography, Tbilisi, 24-29 January 1977. Materials). Leningrad, 1977, 388 p. (RZhRadiot, 5/78, 5Ye5)

IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BAPS Chim	(BAPCA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Chimiques
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN Arm	(DANAA)	Akademiya nauk Armyanskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
DAN Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
EOM	(EOBMA)	Elektronnaya obrabotka materialov
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FDiR	(FDRSB)	Fizyka dielektrykow i radiospektroskopia. Prace komisji matematyczno-przyrodniczej Poznanskie towarzystwo przyjaciol nauk
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FGiV	(FGVZA)	Fizika goreniya i vzryva
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Az	(IAFMA)	Akademiya nauk Azerbaydzhanskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Kaz	(IAKFB)	Akademiya nauk Kazakhskoy SSR. Izvestiya. Seriya fiziko-matematicheskaya
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika

IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(RZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1		Sbornik. International Conference on Phenomena in Ionized Gases. 13th. Berlin, 1977. Proceedings. Contributed Papers. Part 2. Leipzig, 1977.
Sb2		International Conference on Phenomena in Ionized Gases. 13th. Berlin, 1977. Proceedings. Contributed Papers. Part 1. Leipzig, 1977.
Sb3		Elementy i tekhnicheskiye sredstva upravleniya i regulirovaniya. Novocherkassk, 1977.
Sb4		Vsesoyuznaya konferentsiya po inzhenernym problemam termoyadernykh reaktorov, Leningrad, 28-30 June 1977. Doklady, v. 2, Leningrad, 1977.
Sb5		Opticheskaya golografiya i yeye primeneniye. Leningrad, Nauka, 1977.
Sb6		Prostranstvennyye modulyatory sveta. Leningrad, Nauka, 1977.

Sb7		Radiotekhnika, no. 45, 1978.
Sb8		Voprosy atomnoy nauki i tekhniki. Seriya proyektirovaniye, no. 2, 1977.
Sb9		Mezhdunarodnyy simpozium po perekhodnomu izlucheniyu, chastitsam vysokikh energiy, Yerevan, 1977. Trudy. Yerevan, 1977.
Sb10		Opticheskiye i elektrooptricheskiye metody i pribory analiza sostava veshchestva. Kiyev, 1977.
Sb11		Vychislitel'naya tekhnika. Vil'nyus, 1977.
Sb12		Vsesoyuznaya shkola po golografii. 9th. Tbilisi, 24-29 January 1977. Materialy. Leningrad, 1977.
Sb13		Tekhnicheskaya elektronika i elektrodinamika, no. 2, 1977.
Sb14		Kachestvo elektronno-luchevykh priborov. Kiyev, 1977.
Sb15		Eksperimental'nyye metody i apparatura dlya issledovaniy turbulentnosti. Novosibirsk, 1977.
Sb16		Vsesoyuznaya shkola-konferentsiya molodykh uchenykh po fizike plazmy "Sovremennyye metody nagreva i diagnostiki plazmy," Khar'kov, 1977. Tezisy dokladov. Khar'kov, 1977.
TKiT	(TKTEA)	Tekhnika kino i televideniya
Tr1		Moskovskiy fiziko-tekhnicheskiy institut. Trudy, no. 12, 1977.
Tr2		Belorusskiy universitet. Vestnik, seriya 1, no. 1, 1978.
Tr3		Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly. Izvestiya. Yestestvennyye nauki, no. 3, 1977.
Tr4		Tsentral'nyy aerogidrodinamicheskiy institut. Uchennyye zapiski, v. 8, no. 5, 1977.
Tr5		Moskovskiy fiziko-tekhnicheskiy institut. Trudy. Seriya Obshchaya i molekulyarnaya fizika, no. 9, 1977.
Tr6		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 216, 1977.
Tr7		Trudy uchebnykh institutov svyazi, no. 86, 1977.
Tr8		Tartusskiy universitet. Uchenyye zapiski, no. 443, 1977.
Tr9		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 221, 1977.
Tr10		Moskovskiy energeticheskiy institut. Trudy, no. 334, 1977.

Tr11		VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Trudy, no. 34/64, 1977.
Tr12		VNII vodosnabzheniya, kanalizatsii, gidrotekhnicheskogo sooruzheniya i inzhenernoy gidrogeologii. Trudy, no. 14, 1977.
Tr13		Moskovskoye vysshcye tekhnicheskoye uchilishche. Trudy, no. 258, 1977.
Tr14		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 215, 1977.
Tr15		Nauchnyye trudy vysshikh uchebnykh zavedeniy LitSSR. Ul'trazvuk, no. 9, 1977.
Tr16		VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Trudy, no. 35/65, 1977.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

V. AUTHOR AFFILIATIONS

NS. Non-Soviet
0. Affiliation not given
1. Physics Institute im Lebedev, AN SSSR, Moscow (Fizicheskiy institut im Lebedeva AN SSSR).
2. Moscow State University (Moskovskiy gosudarstvennyy universitet).
3. Institute of Physics, AN BSSR, Minsk (Institut fiziki AN BSSR).
4. Physicotechnical Institute im Ioffe, Leningrad (Fiziko-tekhnicheskiy institut im Ioffe).
5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR).
6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR).
7. State Optical Institute im Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im Vavilova).
10. Institute of Semiconductor Physics, Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov SOAN).
12. Leningrad State University (Leningradskiy gos universitet).
13. Institute of Crystallography, AN SSSR, Moscow (Institut kristallografiya AN SSSR).
14. University of Friendship Among Nations im Lumumba, Moscow (Universitet druzhby narodov im Lumumby).
15. Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR).
16. Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut).
17. Institute of Mechanical Problems, AN SSSR, Moscow (Institut problem mekhaniki AN SSSR).
19. Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut).
21. Acoustics Institute, AN SSSR, Moscow (Akusticheskiy institut AN SSSR).
23. Institute of Atomic Energy im Kurchatov, Moscow (Institut atomnoy energii im Kurchatova).
24. Moscow Higher Technical College im Bauman (Moskovskoye vyssheye tekhnicheskoye uchilishche im Baumana).
30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki).
34. Khar'kov State University (Khar'kovskiy GU).
35. Khar'kov Institute of Radioelectronics (Khar'kovskiy institut radioelektroniki).
38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tekhnicheskiy institut).
39. Institute of Cybernetics, AN GruzSSR (Institut kibernetiki AN GruzSSR).
42. Ural Polytechnic Institute im Kirov, Sverdlovsk (Ural'skiy politekhnicheskiy institut im Kirova).
44. Institute of Applied Physics, AN MSSR, Kishinev (Institut prikladnoy fiziki AN MSSR).
49. Vilnius State University (Vil'nyusskiy GU).
51. Kiev State University (Kiyevskiy GU).
59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issledovaniy AN ArmSSR).
60. Institute of Physics, AN AzSSR (Institut fiziki AN AzSSR).
64. Institute of Atmospheric Physics, AN SSSR (Institut fiziki atmosfery AN SSSR).
65. Institute of Problems of Physics, AN SSSR (Institut fizicheskikh problem AN SSSR).
67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR).

71. Institute of Applied Mathematics, AN SSSR (Institut prikladnoy matematiki AN SSSR).
72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii AN SSSR).
74. Institute of High Temperatures, AN SSSR (Institut vysokikh temperatur AN SSSR).
75. Institute of Automation and Electronic Measurements, Siberian Branch, AN SSSR (Institut avtomatiki i elektrometrii SOAN).
78. Institute of Atmospheric Optics, Siberian Branch AN SSSR (Institut optiki atmosfery SOAN).
79. Institute of Nuclear Physics, Siberian Branch AN SSSR (Institut yadernoy fiziki SOAN).
85. Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR).
87. Belorussian State University (Belorusskiy GU).
94. Gor'kiy State University (Gor'kovskiy GU).
95. State Scientific Research and Planning Institute of the Rare Metals Industry (Gos NI proyektnyy institut redkometallicheskoy promyshlennosti).
98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom GU).
110. Leningrad Electrotechnical Institute (Leningradskiy elektrotekhnicheskiy institut).
113. Leningrad Mechanical Institute (Leningradskiy mekhanicheskiy institut).
118. Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut).
122. Scientific Research Institute of Physicochemistry im Karpov (NI fiziko-khimicheskiy institut im Karpova).
131. Tartu State University (Tartusskiy GU).
133. Central Aerohydrodynamic Institute im Zhukovskiy (Tsentral'nyy aerogidrodinamicheskiy institut im Zhukovskogo).
135. Central Scientific Research Institute of Communications (Tsentral'nyy NII svyazi).
136. Uzhgorod State University (Uzhgorodskiy GU).
140. All-Union Scientific Research Institute of Physicotechnical and Radiotechnical Measurements (VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy).
141. All-Union Scientific Research Institute of Opticophysical Measurements (VNII optiko-fizicheskikh izmereniy).
144. All-Union Scientific Research Institute of Television and Radio Broadcasting (VNII televideniya i radioveshchaniya).
152. Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov).
161. Moscow Institute of Radio Engineering, Electronics and Automation (Moskovskiy institut radiotekhnika, elektroniki i avtomatiki).
174. Scientific Research Institute of Organic Intermediates and Dyestuffs, Moscow (NII organicheskikh poluproduktov i krasiteley).
193. Institute of Theoretical and Applied Mechanics, Siberian Branch, AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mekhaniki SOAN).
202. Institute of Electronics, AN UzSSR, Tashkent (Institut elektroniki AN UzSSR).
205. Moscow X-ray Radiological Scientific Research Institute (Moskovskiy NI rentgeno-radiologicheskiy institut).
210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).
231. Scientific Research Institute of Motion Pictures and Photography (NI kinofotoinstitut).
240. Odessa State University (Odesskiy GU).

248. Institute of Mechanics at Moscow State University (Institut mekhaniki pri Moskovskom GU).
264. Institute of Radiophysics and Electronics, AN ArmSSR (Institut radiofiziki i elektroniki AN ArmSSR).
295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimecheskoy kinetiki i goreniya SOAN).
326. Institute of Radioelectronics, AN SSSR (Institut radioelektroniki AN SSSR).
343. North Caucasus Scientific Center of Higher Education (Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly).
426. Institute of Applied Physics, AN SSSR, Gor'kiy (Institut prikladnoy fiziki AN SSSR).
441. Scientific Research Institute of Physics of Leningrad State University (NII fiziki Leningradskogo GU).
445. All-Union Scientific Research Institute of the Metrological Service, Moscow (VNII metrologicheskoy sluzhby).
450. Scientific Research Institute of Stable Isotopes (NI stabil'nykh izotopov).
451. All-Union Correspondence Institute of the Textile and Light Industry, Moscow (Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti).
452. All-Union Scientific Research Institute of Water Supply, Sewer Systems, Hydraulic Engineering Facilities and Engineering Hydrogeology (VNII vodosnabzheniya, kanalizatsii, gidrotekhnicheskogo sooruzheniya i inzhenernoy gidrogeologii)
453. All-Union Scientific Research Institute of Nuclear Geophysics and Geochemistry (VNII yadernoy geofiziki i geokhimii).
454. Computer Center of the Kara-Kalpak Branch, AN UzSSR, Nukus (Vychislitel'nyy tsentr Karakalpakskogo filiala AN UzSSR).

VI. AUTHOR INDEX

A

ABDULLAYEV G V 58
ABLEKOV V K 4
ABRAMYAN YU A 22
ABRUKOV S A 51
ABRUKOV V S 51
ABUTALYBOV G I 58
ADAMYAN Z N 22
ADRIANOVA I I 22,49
AFONIN YU V 7
AFONNIKOV N A 47
AGAFONOV V G 3
AGROVSKIY B S 35
AKANAYEV B A 31
AKHMANOV S A 49
AKHMEDOV F SH 49
AKSEL'ROD A A 36
ALEKSANDROV YE B 49
ALEKSEYEV-POPOV A V 38
ALEXANDRESCU R 22
ALFEROV ZH I 3
ALIYEVA M KH 38
ALKEYEV N V 61
ALLAKHVERDIYEV K R 30
ALMAYEV R KH 36
ANAN'YEV YU A 8
ANDREYCHIK YE I 48
ANDREYEV V M 3
ANDRIYESH A M 21
ANDRYUSHIN V YE 22
ANGELOVA L A 37
ANIKIN V I 33
ANNENKOV V I 2
ANTONOV G S 70
APOLLONOV V V 21
APOSTOL D 49,67
APOSTOL I 67
ARAKELYAN V S 59
ARIFOV U A 64
ARISTOV V V 37,49
ARKHIPIN V G 24
ARM YE M 33
AROL'D M U 35
ARSEN'YEV P A 1
ARTYUSHENKO V G 66
ARUTYUNYAN V M 22,29
ARZUOV M I 66
ASANALIYEV M K 67
ASHCHEULOV YU V 44
ASHUROV M KH 1
ASLANIDI YE B 45
AUGUSTOV P A 43
AVETISYAN A G 59
AVRORIN A V 38
AXINTE C 9
AZIZOV E A 19
AZOVTSEV V P 22

B

BABAYEVA T M 54
BABENKO N K 39
BACHMANN P 49
BADZIAK J 29
BAGDASAROV KH S 1
BAIADZE K V 45
BAKHRAKH V L 32
BAKHTADZE A B 45
BAKUNOVA T I 37
BAKUT P A 62
BALAYEV V I 33
BALTRAMEYUNAS R 59
BANAKH G F 35
BARANOV N B 26
BARANOV V YU 8
BARANOWSKI A 6,67
BARCHUKOV A I 21,66
BARINOV V V 62
BARKHUDAROV E M 8
BASHKINA G A 37
BASIYEV T T 1
BASOV N G 68
BATOV M G 46
BATYRBEKOV G A 8
BAUM B A 62
BAZAROV YE N 8,45
BEKKER A M 39
BEKSHAYEV A YA 47
BEL'DYUGIN I M 25
BELEVITNEV V R 58
BELOGOL'SKIY V A 46
BELOTITSKIY V I 37
BELOUSOV B I 22
BELOUSOV V I 50
BELOUSOVA I M 16
BELOUSOVA M V 22
BELOZEROV A F 49
BELYAKOV L V 59
BELYAYEV V A 59
BELYAYEV V S 4
BENEDICHUK I V 27
BERDANOSOV V A 50
BEREGULIN YE V 21
BEREZKIN A N 49
BEREZOVSKIY V P 8
BERMAN G P 31
BERNOTAS T P 35
BERTEL' I M 8
BESEDIN A G 37
BESEDINA A N 13
BESEDOVSKIY P Z 19
BESSONOV A F 20
BIBERMAN L M 31
BIKEYEV O N 50
BIRYUKOV A S 12
BIRYULIN YU F 59
BLAGOV M I 59
BLAHA J 50
BLASZCZAK Z 59
BLAZHENKOV V V 46
BOBRINEV V I 36
BOGDANKEVICH O V 4
BOGLAYEV YU P 37
BOKHAN P A 13
BOLDIN V G 60
BOLDYREV S A 20
BONCH-BRUYEVICH A M 5,28
BONDARENKO A N 6
BONDAREV A D 59
BORISEVICH N A 16
BORISOV N A 4
BORISOV V F 50
BORISOV V M 8
BORODAVKA V P 47
BORODIN V I 21
BOROVIK-ROMANOV A S 59
BORSHCH A A 60
BOYAKOV V M 64
BOYKO V A 68
BOYTSEKHOVSKAYA O K 35
BOYTSOV V F 50
BOZHKOV A I 27
BREHM P 33
BREKHOVSKIKH G L 39
BRESLAVETS V P 24
BRITOV A D 4
BRODIN M S 2,60
BRODOV M YE 4
BRODSKIY YU YA 68
BRUNKE W 33
BRYUNETKIN B A 4
BUDKIN L A 60
BUGAYEV A A 23,39,64
BUKHENSKIY M F 39
BUKHTOYAROVA N I 39
BUKIETYNSKA K 30
BUKIN G V 1
BULAKH B M 61
BULANIN M O 45
BULATOV YU P 39
BURMAKIN V A 13
BURMASOV V S 68
BURTSEV L P 45
BURTSEV V A 68
BUSHUYEV V A 31
BYALKO N G 19
BYCHENKOV V YU 69
BYCHKOV YU I 16
BYKOVSKAYA L A 52
BYKOVSKIY YU A 21,50,64
BYLKIN V I 13
BYSTROV P I 21
BYSZEWSKI W 6

C

CHALTYKYAN V O 29
CHAPLIYEV N I 66
CHAVUSER G SH 48,53
CHAYKA M P 13
CHEKIN S K 46
CHELIDZE T YA 8
CHERKASOV YE M 15
CHERKASOV YU A 41
CHERNEN'KIY V I 25
CHERNIKOV V A 73
CHERNIY M R 21
CHERNOV B K 42
CHERNYAVSKIY A F 7
CHERNYKH V A 34
CHERNYSHEV N I 20
CHERPAKOVA N S 55
CHETVERTKOV V I 69
CHICHINADZE V V 8
CHIRKOV L YE 27
CHIZHIKOV G G 22,49
CHLODZINSKI J 50
CHUDNOVSKIY F A 23,39,64
CHUKICHEV M V 4

CHURAKOV V V 8,10
CHUZO A N 46
CIBIN P K 69
COJOCANU E 67
COMANICIU N 9,22

D

DANILYCHEV V A 15
DARVOYD T I 67
DARZNEK S A 4
DAVIDYUK N YU 3
DAVYDOV A YE 51
DEBROV V L 45
DEGTYAREV V G 50
DEMCHUK M I 47
DEMIN A I 15
DENCHEVA M G 24
DENISOV F T 51
DENISOV L K 6
DENISOV V N 60
DENISYUK YU N 74
DENUS S 69
DERYUGIN L N 33
DERZHIYEV V I 67
DEVYATKOV L A 62
DIANOV YE M 25,66
DIDYK L A 47
DIDYUKOV A I 15
DMITRIYEVA I A 65
DOBRITZ G 13
DOBRO L F 11
DOLGOPOLOV S G 21
DOLGOV-SAVEL'YEV G G 7
DONNERHACKE K H 9,51
DONTSOVA V V 44
DOROFEYEV V G 60
DOROSH V S 11
DOROSHKEVICH M A 7
DOYNIKOV A S 75
DRAGANESCU V 22,67
DREMIN A B 74
DROBYSHEV A I 74
DROKOV G F 8
DUB I S 28
DUBIK A 50
DUBNISHCHEV YU N 51
DUBOVETS V G 17
DUBROVSKIY A V 72
DUMITRAS D C 22
DUN A Z 23
DUTU D C 22
D'YAKOV A S 15
DYATLOV V D 68
DYMSHITS YU I 16

E

EBERT W 12,18
ECHTERMEYER F 17
ELBERN A 56
ENGEL'SHT V S 67
EPISHIN V A 18

F

FARCAS I 9
FAYENOV A YA 68,69
FAYZULLOV F S 27,67
FEDOROV A I 16
FEDOROV V A 14,40,45
FEDOROV YU F 3
FEDOTOV S I 69
FEDYAKOV V P 68
FEL'DBUSH V I 23
FEL'DMAN N B 37
FENIN V V 1
FERSTER E 69
FEYGENBAUM M G 75
FILIPCHUK T S 29
FILIPPOV V P 52
FILYUKOV A A 67
FIRSOV V V 25
FLEYSHER V G 64
FLOREK S 72
FOFANOV YA A 48
FOLIN K G 30,31
FOMICHEV A A 1
FOTIYEV V A 57
FRADKIN E YE 58
FRANKO R T 52
FREYDMAN G I 26
FURSHCHIK A B 34

G

GAFUROVA N S 43
GALAGOVETS I V 62
GALIYEV A L 65
GALOCHKIN V T 64
GANDEL'MAN G M 65
GANZHA V A 7
GARBUZOV D Z 3
GASOYAN M S 71
GATZKE J 72
GAVRILOV F F 39
GAVRILOV N I 4
GAVRILYUK A I 64
GAYNER A V 31
GAYSENOK V A 31
GAZUKO I V 64
GELASHVILI G V 8
GEL'MAN M M 47
GEMBARZHEVSKIY G V 18
GENERALOV N A 9
GENICH A P 15
GENKIN G M 24
GERASIMENKO V S 62
GERASIMOV G A 8,45
GERASIMOV I V 51
GERASIMOV V B 21
GERKE R R 43
GERSHENZON YU M 46
GETS K 69
GHILAC C P 9
GINZBURG V M 40,51
GITLEVICH A YE 65
GLADSKOY V M 50
GLADTSIN M M 51
GLAZOV G N 51
GLEYZER A I 31
GLOTOV YE P 15
GLUKHIKH V A 69
GLUSHKO B A 29
GNATOVSKIY A V 23,34
GOCHELASHVILI K S 35
GODIK E E 60
GOER D B 60
GOGOKHIYA V V 10,63
GOLOSNOY O V 22
GOLOVKO L F 65
GOL'TSMAN V L 68
GOLUBEV L V 22
GOLYAYEV YU D 49
GOMENYUK A S 52
GONCHAROV V F 21
GONDRA A D 5,6
GORBUNOV V I 50
GORBUNOVA T M 13
GORDEYEV A N 44
GORDIYETS B F 9
GORDON YE B 17
GORELENKO A YA 16
GORELIK V S 60
GORYACHEV D N 59
GORYACHKIN D A 8
GRACHEV A I 37
GRAD G A 68
GRASSME W 2
GREBENYUK V N 26
GRIBKOV V A 72
GRIDNEV A G 13
GRIGOR'YANTS R R 70
GRIGOR'YEV V I 37
GRIMBLATOV V M 47
GRIN' L YE 47
GRIN' YU G 24
GRISHMANOVSKIY A N 27
GRUZINSKIY V V 5
GRYAZNOV I M 64
GUBANOV B S 74
GUBIN V P 8
GUDAYLIS V V 28
GUDKOV L D 51
GUDZENKO A I 20
GUDZERA S S 40
GUENDEL H 12,70
GURARI M L 52
GUREVICH S A 3
GUREVICH S B 23,40,74
GUROV S YE 51
GUR'YANOV A A 64
GUSEV K G 52
GUSEV O A 69
GUSHCHIN V S 62
GUTU I L 9
GUYVAN A G 11
GVOZDOVSKIY V T 40
GYRDEV L L 27

H

HEISE D 17
HELBIG V 70
HOFF F 37
HOLZHAUER E 70

I

IBRAGIMOVA E M 75

IGNAT'YEV L P 19
IGONIN G M 51
IGOSHIN F F 22
IGOSHIN V I 16
IL'IN B N 69
IL'INOV M P 29
IL'YASHENKO N I 40
IL'YUSHENKO L V 40
IL'YUSHKO V G 12
INDZHIYA F I 33
IOGANSEN L V 33
IPPOLITOV I I 35
IRMER J 12
IRTUGANOV V M 8
ISAKOV A I 72
ISAYEV S K 25
ISTOMIN YU A 69
IVAKIN YE V 39,40
IVANNIKOVA G YE 22
IVANOV A S 69
IVANOV I 9
IVANOV L I 64
IVANOV M A 24
IVANOV P 7
IVANOV R S 15
IVANOV V YU 52
IVANOV YE V 35
IVANOVA G D 52
IVASHKIN P I 4
IZBINSKIY A M 34
IZGORODIN V M 26

J

JAKL M 7
JANKIEWICZ Z 29
JEZOWSKA-TRZEBIATOWSKA B 30

K

KABEL' M 70
KACHANOV YE I 40
KAIPOV B 75
KAKICHASHVILI SH D 40,41
KALACHEV N V 72
KALININ A V 70
KALININ V P 8
KALININ YU A 21
KALINUSHKIN V P 63
KALISKI S 50,70
KALITEYEVSKAYA YE N 5
KALLISTRATOVA M A 35
KALOSHA I I 16
KALUGIN V V 47
KAMINSKIY A S 61
KAMSHILIN A A 44
KANAYEV I F 61
KAPTUR V F 47
KAPUSTIN A A 52,74
KARAMZIN YU N 24,29
KARASEV M YE 66
KARAVAYEV S M 4
KAREVA V A 60
KARLOV N V 11,61
KARNATOVSKIY V YE 41,61
KARNAUKHOV V N 41
KARNYUSHIN V N 9
KARPOV S YU 4
KARPOV V YE 41
KARTAZAYEV V A 14
KASASENT D 34
KASOYEV S G 28
KASPERCZUK A 69
KATYRIN V V 61
KAZAKOV S A 8
KAZARYAN M A 14
KERNER M N 45
KHABAROV YU I 37
KHADZHIMUKHAMEDOV KH KH 47
KHAMIDULLIN B SH 62
KHARLAMOV B M 52
KHAZIZOV R G 59
KHIZHNYAK A I 5,53
KHLYPALO YE I 74
KHODORKOV I L 52
KHOMICH V YU 21
KHOMYAKOV YU N 54
KHRAMOV A G 57
KHULORDAVA T G 63
KHVALOVSKIY V V 52
KHVOSTENKO G I 13
KIELICH S 61
KINAKOV S K 8
KIPEN' A A 2
KIRILOV A YE 14
KIR'YANOV A P 22
KIRYUKHIN YU B 8
KISELEV V A 34
KISELEVA K L 65
KISELEVSKIY L I 70
KISILITSA P P 40
KISLOVSKIY I L 41
KLEMENT'YEV V M 21
KLIMENKO I S 53
KLIMKIN V M 13,14
KLIMOVSKIY I I 14
KLYUCHNIKOV A S 41
KLYUYEV YU A 47
KNYAZEV B A 9
KNYAZEV I N 46
KOBZEV G A 31
KOCHETOV I V 8,11
KOENIG R 31
KOLEROV A N 53
KOLESNIKOV YU A 19
KOLOKOLOV A I 41
KOLOMIYETS A D 39
KOLOMIYETS B T 40,45,61
KOLOMIYETS S M 36
KOLPAKOV A V 31
KOLYSHKIN V I 3
KOMAROV K P 31
KOMITOV L K 38
KOMPANETS I N 37,38
KONDRAT'YEV K A 19
KONEV YU B 11
KONJEVIC N 72
KONOU V I 67
KONOV V I 66
KONSTANTINOV O V 41
KONSTANTINOV V B 38
KONYEV YU B 10
KONYUKHOV V K 10,63
KOPULOV A V 21
KOPYLOV YE A 38
KOPYLOVSKIY B D 22
KORESHEV S N 41
KORKHOV YE L 20
KORMER S B 26
KORNILOV V A 68
KORNIYENKO L S 25
KOROBITSYN V A 16
KOROBKIN V V 4,27
KOROCHKIN L S 19
KOROLEV F A 26,47
KOROLEV N M 15
KOROVIN V YA 35
KORSHEVER I I 38
KOSMA B 9
KOSOVSKIY L A 53
KOSTIN M N 16
KOSTIN V V 66
KOSYNKIN V D 9
KOTENKO L P 46
KOTLYACHKOV M I 38
KOTLYAR P YE 23
KOTOV B A 57
KOTOV YU A 57
KOTOVA S P 38
KOVALENKO V S 65
KOVALEV A A 30,65
KOVALEV G V 31
KOVALEV V I 67
KOVALEVSKIY V I 21
KOVNER M A 45
KOZENKOV V M 40
KOZIN G I 72
KOZLOV A S 17
KOZLOV G I 70
KOZLOV N A 5,6
KOZLOV N P 32
KOZLOV S F 46
KOZLOVA T A 72
KOZOROVITSKIY L L 7
KRASA J 11
KRASNOPEROV L N 46
KRASNOV I V 6
KRAUKLIS A V 15
KRAVCHENKO V F 12
KRAVCHENKO V I 53
KRAVETSKIY A G 16
KRAVTSOV N V 25
KRAYNOV V P 32
KREST'YANINOV A S 47
KREYNES N M 59
KRIKOROV V S 25
KRINCHIK G S 53
KRINITSYN YU M 6
KRIVORUCHKO A I 23
KRIVTSOV I YU 74
KROKHIN O N 70,72
KRSEK J 7
KRUGLYAKOV E P 68
KRUGLYY A YE 15
KRUPA N N 60
KRUPITSKIY E I 33,42
KRYLOV B V 19,20
KRYNETSKIY B B 61,63
KRYUCHENKO V N 22
KUCH'YANOV A S 30

KUDRYAVTSEV YE M 15
KUDRYAVTSEV YU A 46
KUKHTAREV N V 6
KUKUSH V D 47
KULISH N R 61
KUNTSEVICH B F 8
KURBATOV A A 71
KURBATOV L N 4
KURENEV YU P 52
KURIK M V 59
KURILO N I 41
KURNOSOV A K 11,70
KUSHNIR V R 18
KUSTOV YE F 25
KUTIKOVA N P 54
KUTUKOV V B 71
KUVSHINSKIY N G 42
KUZ'MIN G P 11
KUZ'MIN R N 31
KUZ'MINA N P 46
KUZNETSOV A A 47
KUZNETSOV A I 60
KUZNETSOV M I 46
KUZNETSOV N M 46
KUZNETSOV V P 47
KUZNETSOV V V 38
KYTINA I G 67

L

LADYGIN M V 7
LANTRATOV S V 49
LANTRATOV V M 3
LARCHENKO V I 52
LARIONOV V P 3
LARIONTSEV YE G 30,53
LASHKOV G I 42
LATMANIZOVA G M 69
LATUSH YE L 14
LAVRIK N L 46
LAZARENKO B R 65
LAZAREV V B 72
LAZARUK A M 40
LEBEDEV A K 32
LEBEDEVA V V 47
LEMANOV V V 25,27
LENKOVA G A 44
LEONOV R K 65
LEONOV YE I 59
LEONOVA T N 56
LESHENYUK N S 10
LESNOY M A 13
LETOKHOV V S 46,74
LETOV D A 33
LEVASHKEVICH L V 30
LEVI A M 47
LEVICHEV A S 37
LEVINSON G R 22
LEWANDOWSKI B 70
LIFSHITS T M 52
LIS L 12
LISITSA M P 61
LISITSKIY I S 67
LISYANSKIY B YE 43,48,53
LITVAK A G 68
LITVINOVA N A 64
LOBANOV A N 10
LOBKOV V S 62
LOGGINOV A S 3
LOGINOV A P 23,34
LOGUNOV A N 15
LOM T` 13
LONSKIY E S 23
LOPATOV G YA 7
LORENZ U 2
LOS' V V 35
LOSEV V F 16
LOTKOVA E N 11
LOWKE J J 71
LUEMKEMANN B 13
LUGOVSKOY V B 64
LUKIN I P 36,53
LUKIN V P 36
LUKINYKH V F 24,25
LUKOVNIKOV A I 10,63
LUK'YANOV G A 16
LUSHCHIKOV I I 52
LYNDIN N M 54
LYSIKOV YU I 66
LYUBIN V M 40,45,61

M

MACIAK T 34
MAGDINETS V V 40
MAGERAMOV A B 38
MAGHIAR GH 49
MAKARENKO B I 24
MAKARENKO V A 64
MAKAROV YU P 7
MAKHOTENKO A B 11
MAKIN V S 60
MAKSHANTSEV B I 65
MAKUSHENKO YU M 1
MALASHCHENKO V A 32
MALIKOV M M 15
MALINOVSKIY V K 61
MALOV A N 9
MALOV V V 33
MALYKHIN V A 54
MALYSHEV I F 69
MALYSHEVA T P 48,53
MALZ D 51,71
MAMAYKIN V S 53
MAMEDOV T G 30
MAMONTOV I YA 44
MANDEL' A YE 28
MANDROSOV V I 62
MANELIS G B 15
MANITA O F 13
MARAKHONOV V M 1
MARCHENKO V G 4
MARCHENKO V M 4
MARCZAK J 50
MARDENOV M P 8
MARGOLIN L YA 71
MARKOV V B 69
MARKOVICH I E 28
MARSHAK I S 75
MARUSIY T YA 53
MARYKIVSKIY O YE 47
MASIEJEWSKI A 63
MATROSOV V N 1
MATSKO M G 60
MATYUGIN YU A 21
MATYUSHIN G A 19
MAZAN'KO I P 7
MAZHUKIN V I 66
MAZNICHENKO A F 61
MAZURAK Z 30
MEDVED' N M 23
MEDVED' N V 34
MELLEKH YE M 69
MEL'NIKOV L S 19
MERZLYAKOV N S 41,54
MERZON G I 46
MESYATS G A 16
METEV S M 66
MEZHEVOV V S 8
MICHKOV A N 37
MIHAILESCU I N 67
MIKHAILOV A V 57
MIKHAILOV YU A 69
MIKHALEVSKIY V S 12
MIKHAYLOV V A 26
MIKHAYLOV V P 42
MIKHAYLOV V V 65
MIKHEYEV L D 16
MIKHEYEVA I L 35
MIKHEYEVA V P 43
MIKHNOV S A 19
MILER M 37
MIL'VIDSKIY M G 3
MINEYEV YE K 22
MIRKIN L I 64
MIRONOV V A 68
MIRONOV V S 67
MIRONOV YU M 2,34
MIRZABEKYAN E G 22,59
MIRZAYEV AG T 47
MIRZAYEV AS T 47
MISTA L 25
MITIN G G 60
MITSUK V YE 73
MITYUGOV V V 47
MOCHALOV A V 54
MOLCHANOV A S 64
MOLIN YU N 46
MOLOCHEV V I 2
MONJAN I 67
MORACHEVSKIY N V 27
MORGULIS L M 3
MOROZOV P A 43,48,53
MOROZOV S F 26
MOROZOV V N 38
MOROZOVA S P 43,48,53
MORY S 31
MOSTOVSKIY A A 23
MOTOVILOVETS I A 48
MOTYLEV S L 27,71
MOZGO A A 19,20
MUCHA Z 6,67
MUKHAMEDGALIYEVA A F 71
MUMLADZE V V 63
MURASHOVA V A 59
MURAVEYSKAYA G S 56
MURINA T M 1,63
MUSTAFIN K S 20
MUSTAFINA L T 42,49,54
MYL'NIKOV G D 2

N

NAIDU M S 10
NAKHODKIN N G 42
NALIMOV I P 42
NALIVAYKO V I 41,52
NARKYAVICHYUS V 59
NASYROV U 62
NATAROVSKIY S N 52
NAUMOV V G 11
NAZAROV V V 16
NECHUYEV S I 68
NEMCHINOV I V 28
NEMKOVICH N A 6
NEMTINOV V B 42
NEVDAKH V V 10
NEVEROV V G 16
NEVOLIN V N 50
NEYGAUZ M G 46
NEZHEVENKO YE S 23
NIEDZIELSKI W 50
NIKIFOROV S M 11
NIKISHIN S A 1
NIKITIN V I 5
NIKITIN YE P 66
NIKOLAYEV I N 64
NIKOLAYEV M V 23
NIKOLAYEVSKIY V G 4,19
NIKULIN V YA 72
NIZ'YEV V G 8
NOVAK M 11
NOVGORODOV M Z 11
NOVIKOVA A M 48
NYUNKA V 59

O

OBOZNENKO YU L 27
OBRAZTSOV V S 54
OBUKHOV A S 67
ODINTSOV A I 47
ODINTSOV V I 26
OGANESYAN S G 29
ORAYEVSKIY A N 16,64
OREKHOV M V 65
ORISHICH A M 7
ORLOV L N 10
ORLOV V K 7,10,21
ORLOVA N D 62
ORLOVA N G 42
OSIKO V V 1
OSIPOVA N V 13
OSTROVSKAYA L M 21
OSTROVSKIY YU I 74
OSVENSKIY V B 3
OVCHINNIKOV O B 69
OVECHKIS YU N 43
OVILKO O G 50
OVVYAN P P 20
OWSIK J 50
OZOLS A O 43

P

PADUCH M 69
PAK G T 3
PAL'SKOV V V 47
PANAKHOV M M 41
PANOV A B 23
PAPP V F Z 12
PARITSKIY L G 38,59
PASHCHENKO G S 59
PASHININ P P 71
PASHKIN S V 17
PASHKOV O I 8
PASMANIK G A 27
PASYNKOVA L M 63
PAVLOV L Y 26
PAVLOV V V 74
PAVLOV YE P 69
PAVLOVA N O 16
PECHERSKIY O P 69
PEKHOSHKINA T I 14
PELEKHATYY V M 34
PERADZYNSKI Z 67
PEREDEREYEVA S I 40
PEREGUDOV G V 73
PERESH YE YU 62
PERETYAT'KO P I 17
PERFILOVA T G 48
PERINA J 25
PERLIN A S 69
PERSONOV R I 52
PERUCHEV P G 69
PETNIKOV A YE 44
PETNIKOVA V M 29
PETROV G D 53
PETROV M P 37,44
PETROV V D 42
PETROVICH I P 40
PETRU F 7,54,55
PETRUKHIN A I 28
PETRUN'KIN V YU 57
PETRYANOV I V 58
PETUKHOV V O 8
PEVGOV V G 8,11
PEVTSOV F V 4
PIEKARA A N 29
PIKHTELEV A I 60
PIKUZ S A 68,69
PILIPETSKIY N F 72
PIOTROVSKIY YU A 14
PISAREVSKAYA S A 38
PISHCHULINA I A 43
PISKAREVA M V 55
PISKARSKAS A S 28
PISKUNOVA L V 26
PLATISA M 72
PLESHANOV YU YE 28
PLOTNICHENKO V G 22
PODGAYETSKIY V M 19
PODOBEDOV V B 60
PODYMINOGIN A A 68
POEHLER M 17
POKORA L 69
POKROVSKIY YA YE 61
POLIVANOV YU N 60
POLONIN A K 41
POLOVINKIN A N 33
POLUNIN V A 12
POLUNIN YU P 14
POLZE S 18
PONOMARENKO A G 7
PONOMAREVA R R 37
POPELA B 7,55
POPOV A K 24,25
POPOV YU N 55
POPOV YU V 49
POPOVA N R 41
POPOVA T YA 51,71
POPOVICHEV V I 72
PORTNOY YE L 3,4
POSOSHENKO L Z 34
POTAPOV S K 45
POTAPOV YE V 23
POTEKHIN G S 52
POVEDAYLO V A 16
POZDNYAKOV A YE 67
POZDNYAKOVA L A 62
PRAVILOV A M 17
PREDKO K G 43
PREOBRAZHENSKIY N G 71
PRESNYAKOV YU P 44
PRIGOROVSKIY N I 55
PROKHOROV A M 4,21,32,34
54,63
PROKOP'YEV V YE 13,14
PROSALOVA N A 43
PROTASOV YU S 32
PROTSENKO YE D 72
PRUSS-ZHUKOVSKIY S V 57
PUSTOVALOV V V 15
PYATAKHIN V I 33
PYATNITSKIY L N 71
PYNDYK A M 60

Q

QUILLFELDT W 55

R

RAGOZIN YE N 73
RAGUL'SKIY V V 72
RAKOV A V 23
RASSOKHA A A 52
RATAJSKA B 29
RAYKH M E 3
RAYZER YU P 9
RAZUMOVA I K 5,28
RAZUMOVSKAYA A I 49
REBIGAN S N 55
RED'KO V P 28
REDLICH L I 2
REZAYEV N I 26
RICHTER G 32
RISBUD A V 10
RODIN A V 14
RODIN V N 21
ROHLICEK F 2
ROKOS I A 55
ROKOSOVA L A 55
ROMANOV G N 32
ROMANOV YU F 41
ROMASHKOV A P 56
ROSS W 17,72
ROTHARDT L 11
ROVINSKAYA YU I 43
ROYTENBURG D I 9

ROZANOV N N 29
ROZANOV V B 70
ROZENFEL'D B I 46
RUBANOV A S 39,40,42
RUBEKO L M 6
RUBENCHIK A M 24
RUBINOV A N 6
RUKMAN G I 43,48,52
RUMYANTSEV V D 3
RUSBUELDT D 56,72
RYBAKOV V A 28
RYKHLOV A F 38
RYVKIN S M 21

S

SADOVSKIY B F 58
SAFARYAN F P 30
SAFRONENKO A P 69
SAFRONOVA A S 68
SAGALOVICH A YA 21
SAGDEYEVA A M 43
SAKHAROV S I 65
SALAYEV E YU 30,58
SALMANOV V M 58
SALO L A 62
SAMARTSEV V V 62
SAMSONOV M A 67
SAPRYKIN E M 31
SARDYKO V I 57
SARZHEVSKIY A M 30,31
SATTIKULOV M 27
SAVELOV A S 72
SAYAUSKAS S 56
SAYDOV P I 57
SCHAEFER D 66
SCHLOTT M 72
SCHMECHTIG N 33
SCHUBERT M 9,51
SELEZNEV V A 20
SELEZNEV V G 56
SELIGER K 17,70
SELIVANOV V M 74
SEM M F 14
SEMAK D G 38
SEMENOV A S 2,34
SEMENOV G B 43
SEMENOV O G 72
SEMENOV YE P 65
SEMOCHKIN P N 37
SENATOROV K YA 3
SENCHENKOV I K 48
SERGEYEV P A 56
SERIKOV R I 12
SERKIN V N 30,53
SEROV R V 4
SEVAST'YANOV B K 1
SEVCHENKO A N 30
SEYSYAN R P 1
SHABUNYA A B 48
SHALABAYEV D A 31
SHALAMOV S P 7
SHANDAROV S M 28,50
SHAPOSHNIKOV B G 23
SHAROV S N 74
SHASHKOV V M 11
SHAVERDYAN F M 59
SHCHEBLYKIN YU V 2
SHCHELOKOV R N 56
SHCHERBAKOV G N 23
SHCHERBAKOV I A 1
SHCHERBAKOV YE A 34
SHCHUKIN L I 75
SHCHUPAK V I 19
SHELKOV YE M 70
SHEMETOV V V 35
SHEVAKIN YU F 21
SHEVCHENKO S I 48
SHEVEL' S G 2
SHEVERA V S 12
SHIKANOV A S 70,73
SHILO V P 61
SHIPULO G P 54,58
SHISHOV V I 35
SHKADAREVICH A P 17
SHKUNOV V V 26,27,43
SHMAL'KO A V 21
SHMAREV YE K 43
SHMARTSEV YU V 59
SHMIDT V V 24
SHOKIN A A 18
SHOLOKHOV V A 48
SHOYDIN S A 38
SHPAK M T 23,34
SHPIL'RAYN E E 70
SHTAN'KO A YE 44,57
SHTYRKOV YE I 62
SHUBIN L YE 59
SHUGAYEV F V 55
SHUL'GIN B V 39
SHUL'MAN S G 23
SHUL'ZHENKO G I 68
SHUR YA SH 21
SHUTOV B M 62
SHVAREV K M 62
SHVARTS K K 43
SIBEL'DIN N N 61
SIDORENKO A V 21
SIDOROV N K 63
SIDOROVICH V G 26,43
SILIN V P 69,73
SIMONYAN R G 22
SINIS V P 60
SINITSA L N 56
SINTSOV V N 56
SINYAYEV V A 41
SITARZ H 61
SITNIK D N 54
SKAL'SKI M 37
SKLIZKOV G V 69,70,72,73
SKOBELEV I YU 73
SKORIKOV YE A 34
SKRIPKIN A M 36
SKROTSKIY G V 39,44
SLABKO V V 24,25
SLAVENAS I YU YU 28
SLIVKA V YU 62
SMEKHOV G D 57
SMIRNOV A S 68
SMIRNOV G V 19
SMIRNOV I A 23
SMIRNOV S V 36
SMIRNOV V L 21
SMIRNOV V N 60
SMIRNOV V S 5
SMIRNOV YE I 27
SMOL'SKAYA T I 6
SMOLYA A V 37
SMURYGOV A I 34
SNEZHKO YU A 22
SOBEIKH M A 58
SOBOLENKO D N 2
SOBOLEV A G 37
SOBOLEV N N 9,15
SOKOLOVA T N 65
SOKOLOVSKAYA A I 39
SOKOLOVSKIY R I 66
SOLDATOV A N 13,14
SOLOUKHIN R I 9
SOLOV'YEV V A 8
SOLOV'YEV V YE 3
SOROKA A M 15
SOROKOVIKOV V N 58
SOSKIN M S 5,53
SOSKIN S I 38
SOSNIN V A 34
SOTIN V E 33
SOTNICHENKO S A 17
SOYFER V A 44,57
SPIKHAL'SKIY A A 32,54
SPIRIN YU L 40
SRESELI O M 59
STARIK A I 12
STAROBOGATOV I O 28
STAROSTIN N I 8
STEFANOVICH S YU 25
STEL'MAKH O M 61
STEPANENKO N F 22
STEPANOV S I 44
STEPANOV V M 51
STEPANOV YU YU 8
STERIN KH E 60
STOPACHINSKIY V B 61
STOTSKIY G I 15
STOYANOV A K 50
STROMILOV I S 36
STRYLA Z 63
STUDENOV V I 5
STURMAN B I 44,61
SUCHKOV A F 10
SUETINOV V I 3
SUKHANOV V I 42,44
SUKHAREV B V 25
SUKHORUKOV A P 24,29
SUKHOTERIN S V 35
SULTANOV A S 24
SULYAYEV V A 28
SUNGUROVSKIY M A 19
SUSHCHIK M M 26
SUSHKOV V P 4
SUYEDOVA L M 52
SUYETINA N V 52
SUYNOV S KH 38
SUYNOV V KH 38
SVET V D 75
SVIN'IN M P 69
SVIRIDOV A G 9
SVIRIDOV A N 67
SVIRKUNOV P N 36
SYCHUGOV V A 32,54,58

SYREYSHCHIKOVA T I 59
SZYMANSKI M 63

T

TABIBI M B 26
TAGIROV V I 58
TAKTAKISHVILI M I 8
TANIN L V 42
TARAN M D 66
TARANENKO V B 53
TARASENKO V F 16
TARASOV A B 74
TARASOV N A 51
TARKHIN D V 21
TATU V 10
TEPLOV YU F 68
TERICHEV V F 20
TERUKOV YE I 23
TESLENKO A I 47
TIKHONCHUK V T 69
TIKHONOV A F 37
TIMCHENKO B A 21
TIMOFEYEV V A 34
TIMOFEYEV V P 24
TIMOSHECHKIN M I 1
TISHCHENKO A V 54
TISHCHENKO YE A 72
TITOV YU V 11
TIUNOV YE A 58
TKACHENKO B K 15
TOKHADZE K G 51
TOLKACHEV V A 16
TOLMACHEV YU A 14
TOLMACHEVA A YE 23
TOMASHCHIK A K 47
TOMIN V I 6
TORPACHEV P A 30
TRET'YAKOV D N 4
TROFIMOV A N 14
TROITSKIY I N 62
TROITSKIY YU V 48
TROSHIN YE V 21
TRUSHIN S A 8,10
TSARFIN V YA 51
TSAUMZAYL' P 69
TSIVADZE A YU 56
TSUKERMAN V G 41,61
TSVETKOV V A 61
TSVETKOV V B 53
TSYBULYA V I 51
TSYPIN M I 21
TULAYKOVA M A 22
TURISHCHEV YU S 45
TURUKHANO B G 39
TYCHINSKIY V P 22
TYUFYAYEV K V 74
TYURIKOV D A 48
TYURIN YE L 66
TYUTNEVA G K 71

U

UGLOV A A 65
UGOZHAYEV V D 30
UMANSKIY I M 32
URIN B M 10
USMANOV R G 62
USTINOV N D 62
UTOCHKIN K P 47
UZHINOV B M 6

V

VAITKUS YU 59
VAKHIDOV SH A 75
VAKULENKO O V 62
VALOV P M 21
VALYAVKO V V 19,20
VARGIN A N 10,63
VASIL'YEV A A 38
VASIL'YEV R P 19
VASIL'YEV V D 58
VASIL'YEVA G L 71
VASIL'YEVA T K 69
VAVILOV V S 4
VCHERASHNIY R I 57
VEDENEYEV A A 15
VEIT M 55
VEKLENKO B A 32
VELIKOTSKIY V L 72
VERETENNIKOV V A 72
VEREVKIN V A 44
VERGUNOV V B 48
VESELA Z 7
VETCHINKIN S I 32
VIKICEVIC D 70
VILESOV F I 17
VINOGRADOV A V 73
VINOGRADOV V I 4
VINOKUROV G N 18
VIRNIK YA Z 21
VITRIKHOVSKIY N I 2
VLASOV N G 44,57
VLASOV V I 38
VODOP'YANOV L K 22
VODZINSKIY A I 57
VOGLER K 71
VOKHMIN P A 14
VOLGIN V I 65
VOLKOV A YU 15
VOLKOV S YU 1
VOLKOV V M 22
VOLKOV V V 23
VOLKOV YU K 38
VOL'NOV M I 48
VOL'TER V G 67
VOLYAR A V 34
VOROB'YEV V V 35
VORONIN V G 36
VORON'KO YU K 1
VORONKOV V V 63
VORONKOVA G I 61,63
VOROPAY YE S 30
VOROTILIN S P 21
VOROZHEYKINA L F 63
VOYTENKO, I G 28
VOYTOVICH A P 17,57
VYACHESLAVOV L N 68

W

WEISE V H 66
WENDT H 36
WERESZCZYNSKI Z 69
WIEDERHOLD G 9,51
WOJTCZAK J 63
WREMBEL H Z 36

Y

YAKIMENKO M N 59
YAKOVLENKO S I 63
YAKOVLEV V I 33
YANKOVSKIY A A 57
YANUSHEVSKIY N I 2
YANUSHKEVICH V A 64
YARMUKHAMETOV N G 62
YAROSHETSKIY I D 21
YAROSLAVSKIY L P 41
YEGOROV V M 48
YEGOROVA G A 23
YELAYEV V F 13,14
YELETSKIY A V 16
YELISEYEV A A 65
YELISEYEV A I 23
YELYUKHIN V A 4
YERMAKOV O N 4
YEROKHIN A A 73
YEROKHIN A I 27
YEROKHIN A N 73
YERSHOV G M 62
YERSHOV L S 63
YESAYAN S KH 25
YESEPKINA N A 57
YES'KIN V A 63
YEVDOKIMOV YU V 32
YEVSEYENKO V P 73
YEVTIKHIYEV N N 22
YEVTUSHENKO G S 13
YEVTYUKHIN N V 15
YEVTYUNIN A N 13
YEZHKOV A P 1
YUDANOV A A 15
YUDINTSEV YE M 65
YUKOV YE A 73
YUOZOPAVICHYUS A S 28
YURKOV YU V 40
YUSHKO K B 26

Z

ZAGORSKIY YA T 47
ZAKGEYM A L 1
ZAKHARCHENKO S V 36
ZAKHARCHENYA B P 23,39,64
ZAKHARENKOV YU A 70,73
ZAKHAROV N A 25
ZAKHAROV V YU 67
ZALESSKIY V YU 63
ZANADVOROV P N 24
ZAPESOCHNYY I P 12
ZAROSLOV D YU 11
ZASLAVSKAYA V R 22,49
ZASLAVSKIY G M 31
ZASTROGIN YU F 58
ZATSEPIN V G 72
ZAV'YALOV V V 72
ZAWODNY R 61
ZAYNULLIN R I 45

AD-A070 761 DEFENSE INTELLIGENCE AGENCY WASHINGTON DC F/G 20/5
BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS. NUMBER 35. MAY - JUN--ETC(U)
APR 79

UNCLASSIFIED DIA-DST-1740Z-003-79 NL

2 OF 2
AD A070761

END
DATE FILMED
8-79
DDC

2 OF 2

070761

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

ZAYTSEV V G 44
ZBOROVSKIY V A 58
ZEL'CHENKO V YA 74
ZEL'DOVICH B YA 26
ZEL'DOVICH B YA 27
ZELENCHUK A R 64
ZEMSKOV YE M 25
ZEMTSOV YU K 14
ZHARIKHOV YE V 1
ZHAROV V P 52
ZHDANOVICH S N 30

ZBOROVSKIY V A	58
ZEL'CHENKO V YA	74
ZEL'DOVICH B YA	26
ZEL'DOVICH B YA	27
ZELENCHUK A R	64
ZEMSKOV YE M	25
ZENTSOV YU K	14
ZHARIKHOV YE V	1
ZHAROV V P	52
ZHDANOVICH S N	30
ZHEKOV V I	1
ZHELUD'KO I A	11
ZHEYENBAYEV ZH ZH	67
ZHILKIN A M	58
ZHIL'TSOV V P	75
ZHINKRUP A I	20
ZHINZHIKOV G M	16
ZHOLNEREVICH I I	31
ZHOTIKOV V G	59
ZHUKOV V V	14
ZHULANOV YU V	58
ZHULIN V I	18
ZHURAVLEV G I	50
ZIL'BERBERG V V	24
ZIMAKOV V P	9
ZINOV'YEV YU S	45
ZITNIK J	58
ZLENKO A A	58
ZLOBIN A V	48
ZOLOTAREV V P	53
ZOLOTOV YE M	34
ZOREV N N	73
ZUBAREV V YE	52
ZUBOV B V	63
ZUBOV V A	44
ZVONAREVA T K	45