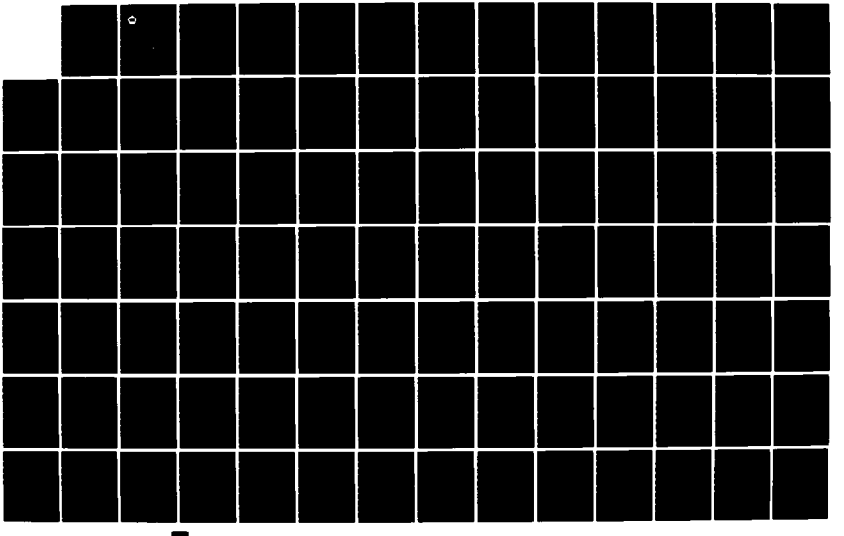
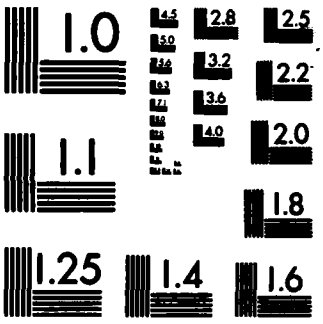
AD-A146 189 BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS NUMBER 65 MAY - JUNE 1983(U) DEFENSE INTELLIGENCE AGENCY WASHINGTON DC DIRECTORATE FOR SCI.. 15 MAY 84 1/2

UNCLASSIFIED DIA-DST-2700Z-003-84 F/G 20/5 NL





DST-2700Z-003-84

(11)

DEFENSE
INTELLIGENCE
AGENCY

Bibliography of Soviet Laser Developments (U)

May-June ~~1984~~ 1983

MAY 15, JUNE 1984

DST-2700Z-003-84

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 65

MAY - JUNE 1983

Date of Report

May 15, 1984

Vice Director for Foreign Intelligence
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-5A.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DST-2700Z-003-84	2. GOVT ACCESSION NO. AD-A146 189	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENT, No. 65 MAY - JUNE 1983		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 Defense Intelligence Agency Directorate for Scientific and Technical Intelligence		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE May 15, 1984 13. NUMBER OF PAGES 158
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, Laser Crystal Growing, Free Electron Lasers, X-Ray Lasers, Gamma Laser, Laser Theory, Laser Biological Effects, Laser Communications, Laser Beam Propagation, Adaptive Optics, Laser Computer Technology, Holography, Laser Chemical Effects, Laser Parameters, Laser Measurement Applications, Laser-Excited Optical Effects, Laser Spectroscopy, Laser Beam-Target Interaction, Laser Plasma

20. ABSTRACT

This is the Soviet Laser Bibliography for May-June 1983, and is No. 65 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; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; adaptive optics; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy, 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 1983, 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 also included. 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 an 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 1983

TABLE OF CONTENTS

I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Kusala, J. (NS). Aid for explaining the operation of a ruby laser. Matematika a fyzika ve skole, no. 5, 1982, 339-341. (RZhF, 6/83, 6A108)

2. Crystal: Rare-Earth Activated

a. Nd^{3+}

2. Belokon', M.V., G.S. Kruglik, and G.A. Skripko (0). Stimulated emission from doped crystals pumped by e-beam. ZhPS, v. 38, no. 5, 1983, 752-755.

3. Golyayev, Yu.D., and S.V. Lantratov (0). Active mode locking in c-w neodymium YAG lasers. KE, no. 5, 1983, 923-932.

4. Kaminskiy, A.A. (13), H.D. Kuersten, and D. Schultze (GDR). The new laser ferroelectric $Pb_5Ge_3O_{11}$-Nd^{3+}. DAN, v. 270, no. 6, 1983, 1373-1376.

5. Kaminskiy, A.A., N.R. Agamalyan, A.A. Pavlyuk, L.I. Bobovich, and V.V. Lyubchenko (13,77). Production and luminescent and lasing properties of $KLu(WO_4)_2$-Nd^{3+}. NM, no. 6, 1983, 982-991.

6. Kaptsov, L.N., and E. Panameno (2). Self-heating of YAG:Nd^{3+} crystals in the cavity of a c-w laser. KE, no. 6, 1983, 1217-1222.

7. Krupkin, V.Kh., A.L. Levit, and V.M. Ovchinnikov (0). Single-frequency periodic pulsed YAG:Nd^{3+} laser. ZhTF P, no. 11, 1983, 641-644.

8. Malov, N.A., A.I. Ryabov, S.P. Nasel'skiy, G.N. Toropkin, Ye.M. Shvom, and I.F. Usol'tsev (0). Effect of gamma radiation on the energy characteristics of YAG:Nd^{3+} crystals. KE, no. 5, 1983, 1067-1069.

9. Pavlyuk, A.A., L.I. Kozeyeva, K.G. Folin, V.G. Gladyshev, V.S. Gulyayev, V.S. Pivtsov, and A.A. Kaminskiy (77,13,75). Lasing at the $^4F_{3/2} \rightarrow {}^4I_{11/2}$ transition of Nd^{3+} ions in $RbNd(WO_4)_2$ and $CsNd(MoO_4)_2$. NM, no. 5, 1983, 847-848.

10. Shelyayev, A.N. (98). New possibilities for controlling competitive interaction of opposed waves in a solid ring laser. KE, no. 5, 1983, 1053-1056.

11. Voron'ko, Yu.K., V.Ya. Kabachenko, L.I. Krysanova, V.V. Osiko, A.A. Sobol', and M.I. Timoshechkin (1). Spectroscopy of Nd^{3+} centers in calcium-gallium-germanium garnet single crystals. NM, no. 6, 1983, 959-963.

12. Zenchenko, S.A. (87). Nd:YAG laser with polarized output. VBU, no. 2, 1983, 18-21.

13. Zharikov, Ye.V., S.P. Kalitin, V.V. Laptev, V.G. Ostroumov, Yu.S. Privis, V.A. Smirnov, and I.A. Shcherbakov (1). Determining the optimal concentrations of neodymium in gadolinium-scandium-gallium garnet crystals. Fizicheskiy institut AN SSSR. Preprint, no. 161, 1983, 11 p.

14. Zharikov, Ye.V., M.B. Zhitkova, G.M. Zverev, M.P. Isayev, S.P. Kalitin, I.I. Kuratev, V.R. Kushnir, V.V. Laptev, V.V. Osiko, V.A. Pashkov, A.S. Pimenov, A.M. Prokhorov, V.A. Smirnov, M.F. Stel'makh, A.V. Shestakov, and I.A. Shcherbakov (1). Lasing characteristics of a periodic pulsed gadolinium-scandium-gallium garnet laser. Fizicheskiy institut AN SSSR. Preprint, no. 162, 1983, 7 p.

b. Er^{3+}

15. Antipenko, B.M., A.A. Mak, O.B. Raba, L.K. Sukhareva, and T.V. Uvarova (0). 2-μm rare-earth laser. ZhTF P, no. 10, 1983, 526-529.

c. Miscellaneous Rare Earth

16. Tkachuk, A.M., M.V. Petrov, L.D. Livanova, and S.L. Korableva (0). Periodic pulsed YLF-Er^{3+},Pr^{3+} laser with a wavelength of 0.8503 μm. OiS, v. 54, no. 6, 1983, 1120-1123.

3. Crystal: Miscellaneous

17. Bagdasarov, Kh.S., L.M. Dorozhkin, A.M. Kevorkov, Yu.I. Krasilov, A.V. Potemkin, A.V. Shestakov, and I.I. Kuratev (18). C-w lasing from $La_{1-x}Nd_xMgAl_{11}O_{19}$ crystals. KE, no. 5, 1983, 1014-1016.

18. Giniyatulin, K.N., A.V. Kruzhalov, V.A. Maslov, and B.V. Shul'gin (42). Effect of the flux composition on the radiation and optical properties of BeO single crystals. NM, no. 6, 1983, 1014-1015.

4. Semiconductor

a. GaN

19. Sokolovskiy, T.D. (507). Dispersion of vibrations in gallium nitride lattices. DAN B, no. 5, 1983, 412-415.

b. CdS

20. Vlasov, G.K. (5). Physical principles of lasing in the far IR from hot excitons in crystals. Sb 1, 163-164.

c. ZnSe

21. Bogdankevich, O.V., L.A. Zhuravlev, A.D. Konovalov, P.I. Kuznetsov, G.A. Meyerovich, V.B. Novikov, Yu.V. Petrushenko, V.N. Ulasyuk, and V.V. Shemet (626). E-beam pumped laser based on heteroepitaxial zinc selenide produced from elementary organic compounds. KE, no. 5, 1983, 1007-1009.

d. Miscellaneous Heterojunction

22. Arsent'yev, I.N., L.S. Vavilova, D.Z. Garbuzov, E.V. Tulashvili (4). Temperature dependence of the lasing threshold in InGaAsP/GaAs double heterostructures ($\lambda_{lasing} = 729$ nm, $T \geq 300$ K, $J_{threshold} \geq 5 \cdot 10^3$ A/cm^2). FTP, no. 5, 1983, 843-846.

23. Ber, B.Ya., A.E. Gol'berg, P.S. Kop'yev, and B.Ya. Mel'tser (4). Axial profile of the composition of narrow heterojunctions grown by molecular beam epitaxy. ZhTF P, no. 12, 1983, 751-754.

24. Bezotosnyy, V.V., A.P. Bogatov, L.M. Dolginov, A.Ye. Drakin, P.G. Yeliseyev, M.G. Mil'vidskiy, B.N. Sverdlov, and Ye.G. Shevchenko (1). GaInPAs/InP injection heterolasers. Tr 1, 18-45.

25. Bogatov, A.P., P.G. Yeliseyev, O.G. Okhotnikov, M.P. Rakhval'skiy, and K.A. Khayretdinov (1). AlGaAs injection laser with an external dispersion resonator made of a diffraction grating and a rotating mirror. KSpF, no. 6, 1983, 23-28.

26. Bogatov, A.P., P.G. Yeliseyev, O.G. Okhotnikov, G.T. Pak, S.A. Pashko, M.P. Rakhval'skiy, and K.A. Khayretdinov (1). Study on a c-w injection laser with an external dispersion resonator. Tr 1, 62-88.

27. Borodulin, V.I., I.V. Voskoboynikova, M.V. Zverkov, and V.I. Shveykin (0). High-intensity injection laser for the visible spectral region. ZhTF P, no. 10, 1983, 590-593.

28. Dolginov, L.M., A.Ye. Drakin, L.V. Druzhinina, P.G. Yeliseyev, M.G. Mil'vidskiy, B.N. Sverdlov, and V.A. Skripkin (1). AlGaAsSb/GaSb and InGaAsSb/GaSb injection heterolasers. Tr 1, 46-61.

29. Gegiadze, G.G., O.I. Davarashvili, I.V. Krialashvili, R.I. Chikovani, and A.P. Shotov (0). Epitaxial layers of $PbSe_{1-y}Te_y$ and $Pb_{1-x}Sn_x$-$Se_{1-y}Te_y$ with matched lattice parameters along the heteroboundary. AN GruzSSR. Soobshcheniye, v. 110, no. 2, 1983, 281-284.

30. Kovac, J. (NS). Growth and properties of optoelectronic elements based on the InP-InGaAsP heterojunction. Elektrotechnicky casopis, no. 1, 1983, 20-27. (RZhF, 5/83, 5D749)

31. Kurbatov, L.N., A.D. Britov, S.M. Karavayev, S.D. Sivachenko, S.N. Maksimovskiy, I.I. Ovchinnikov, M.M. Rzayev, and P.M. Starik (0). Tunable heterolaser for the far IR with wavelengths to 46.2 μm. ZhETF P, v. 37, no. 9, 1983, 422-424.

32. Luk'yanov, V.N., A.F. Solodkov, V.P. Tabunov, and S.D. Yakubovich (141). Effect of thermal processes on threshold characteristics of a heterolaser with spatially inhomogeneous injection. KE, no. 5, 1983, 1030-1033.

33. Pistek, K., J. Novotny, J. Zelinka, V. Malina, Z. Jarchovsky, and J. Kohout (NS). (GaAl)As/GaAs semiconductor injection laser fabricated on substrates with etched grooves. Elektrotechnicky casopis, no. 1, 1983, 34-43. (RZhF, 6/83, 6D1159)

34. Yeliseyev, P.G., O.G. Okhotnikov, G.T. Pak, and Vu Van Lyk (1). Study on AlGaAs-GaAs planar stripe-geometry heterolasers. Tr 1, 89-117.

35. Yeliseyev, P.G., M.A. Man'ko, and G.T. Mikayelyan (1). Model of an injection laser with continuous variation in the complex dielectric permittivity over the p-n junction. Tr 1, 118-125.

36. Yeliseyev, P.G., G.A. Zhuravlev, and V.V. Chernyy (1). Waveguide effect in laser stripe-geometry heterostructures with a rectangular cross-section. Tr 1, 126-153.

37. Yeliseyev, P.G., V.P. Martovitskiy, and O.N. Talenskiy (1). X-ray study on laser heterostructures and raw materials for injection lasers. Tr 1, 186-197.

38. Zargar'yants, M.N., A.B. Kurnosov, Yu.S. Mezin, and N.K. Sarycheva (0). Room temperature lasing from an InGaP-InGaAs-InGaP heterostructure diode produced by liquid epitaxy. ZhTF, no. 6, 1983, 1200-1202.

e. Theory

39. Ivanov, Yu.L., and Yu.B. Vasil'yev (4). Spontaneous and stimulated submillimeter emission from light-weight holes in germanium in strong crossed electric and magnetic fields. Sb 1, 70-71.

40. Moskvin, P.P., S.Yu. Ovchinnikov, and V.S. Sorokin (110). Determining the concentrations of intrinsic defects and deviation from stochiometry in $Ga_xIn_{1-x-y}P_yAs_{1-y}$ solid solutions. Kristal, no. 3, 1983, 530-537.

41. Novoselova, A.V. (2), S.I. Radautsan (44), and V.A. Radul (151). Contribution of N.A. Goryunova to the development of the chemistry and physics of complex semiconductors. Sb 2, 3-4.

42. Obidin, A.Z., A.N. Pechenov, Yu.M. Popov, and V.A. Frolov (1). Study on lasing in the direction of streamer channels in A_2B_6 semiconductors. KE, no. 6, 1983, 1165-1170.

43. Pozhela, Yu.K. (50). Shift in distribution function and luminescence in hot electrons. Sb 1, 60-61.

44. Pozhela, Yu.K., Ye.V. Starikov, and P.N. Shiktorov (50). Power of stimulated emission from p-Ge in $\vec{E} \mid \vec{B}$ fields. Sb 1, 68-69.

45. Sautenkov, V.A., A.M. Akul'shin, V.L. Velichanskiy, A.S. Zibrov, V.I. Malakhova, V.V. Nikitin, S.P. Prokof'yeva, and Ye.K. Yurkin (1). Spectral dependence of Faraday rotation of polarization of light in selective reflection. Fizicheskiy institut AN SSSR. Preprint, no. 190, 8 p.

46. Vorob'yev, L.Ye., and V.I. Stafeyev (29). Study on the inversion of the distribution function of hot holes in p-Ge by optical methods. Generation of IR radiation. Sb 1, 66.

47. Vorob'yev, L.Ye., I.D. Rumyantseva, V.I. Stafeyev, and V.N. Tulupenko (29). Light modulation in p-type germanium in strong crossed E and H fields. Analysis of distribution function inversion of hot holes and absorption coefficient of light. Sb 1, 67-68.

48. Yeliseyev, P.G. (1). Study on injection lasers at the Physics Institute of the Academy of Sciences, USSR. Tr 1, 3-17.

49. Yeliseyev, P.G., I.N. Zavestovskaya, I.A. Poluektov, and Yu.M. Popov (1). Theoretical examination of the physical processes of internal degradation of the active medium of semiconductor lasers. Tr 1, 154-185.

5. Glass: Nd

50. Andreyev, N.F., G.A. Pasmanik, P.P. Pashinin, S.N. Sergeyev, R.V. Serov, Ye.I. Shklovskiy, and V.P. Yanovskiy (1). Multipass amplifier with full use of the active element aperture. KE, no. 5, 1983, 1016-1019.

51. Dzhibladze, M.I., and L.Ye. Lazarev (0). Lasing in neodymium whisker lasers. AN GruzSSR. Soobshcheniye, v. 107, no. 2, 1982, 277-280. (RZhF, 5/83, 5D1052)

52. Rudnitskiy, Yu.P., S.F. Sitnikov, V.I. Sokolov, and L.V. Chernysheva (23). High-power neodymium phosphate glass laser system with improved spectral and spatial radiation characteristics. KE, no. 5, 1983, 932-943.

53. Sitnikov, S.F., and V.I. Sokolov (23). High-power telescopic neodymium phosphate glass amplifier of single-pulse radiation. KE, no. 6, 1983, 1171-1178.

6. Glass: Er

54. Matytsin, S.M. (118). Spectral kinetic and lasing characteristics of erbium laser glass. Moskovskiy fiziko-tekhnicheskiy institut. Dissertation, 1982, 23 p. (KLD, 5/83, 7034)

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

55. Al'tshuler, G.B., Ye.G. Dul'neva, K.I. Krylov, I.K. Meshkovskiy, and V.S. Urbanovich (30). Lasing characteristics of a laser using rhodamine 6G in a microporous glass. KE, no. 6, 1983, 1222-1227.

56. Boyko, B.B., N.S. Petrov, and N.N. Uvarova (0). Shift in the frequency of maximum gain during reflection of light by an inverted medium. ZhPS, v. 38, no. 6, 1983, 900-905.

b. Polymethine

57. Tikhonov, Ye.A. (5). Nonlinear absorption and generation of light by polymethine dye solutions. Institut fiziki AN UkrSSR. Dissertation, 1982, 43 p. (KLD, 5/83, 6933)

c. POPOP

58. Logunov, O.A., A.V. Startsev, and Yu.Yu. Stoylov (1). Lasing from POPOP vapor with a 42 percent efficiency and from POPOP and TOPOT vapor with nonchromatic pumping. KE, no. 5, 1983, 984-988.

d. Miscellaneous Dyes

59. Asimov, M.M., V.N. Gavrilenko, and A.N. Rubinov (3). Using flashlamp pumped dye lasers to study the characteristics of induced absorption in active media based on solutions of complex molecules. PTE, no. 3, 1983, 174-176.

60. Gandel'man, I.L. (5). Dynamic characteristics and various problems in the optimization of pulsed laser-pumped dye optical oscillators. Institut fiziki AN UkrSSR. Dissertation, 1982, 18 p. (KLD, 6/83, 8787)

61. Gandel'man, I.L., M.V. Melishchuk, and Ye.A. Tikhonov (5). Effect of concentration on the lasing efficiency of dye lasers. KE, no. 6, 1983, 1267-1270.

62. Kalinov, V.S. (0). Changing the characteristics of a dye laser by applying a direct-current electric field to the active medium. ZhPS, v. 38, no. 5, 1983, 742-745.

63. Zabello, E.I., and L.V. Vovk (0). The VIDEO-DFB-2 dynamic distributed feedback dye laser. Sb 3, 423-424. (RZhR, 5/83, 5Ye70)

2. Inorganic Liquids

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

64. Blabla, J., J. Smydke, and J. Stefanova (NS). Frequency stabilization of a 633 nm He-Ne laser by the hyperfine structure line of $^{127}I_2$. Sb 4, 162-167. (Avtometriya, no. 3, 1983, 82)

65. Dolbilov, A.S., P.A. Pavlov, V.Ye. Privalov, and V.Z. Shapoval (0). Study on strata in small He-Ne lasers. RiE, no. 6, 1983, 1121-1124.

66. Grimblatov, V.M., P.M. Gusak, and L.V. Mikhaylovskaya (0). Study on simultaneous lasing at transitions of 3.39 and 1.15 μm in an He-Ne laser. ZhPS, v. 38, no. 6, 1983, 894-900.

67. Kasumova, R.D. (16). Study on an He-Ne laser at 0.63 μm with internal phase anisotropy. Moskovskiy inzhenerno-fizicheskiy institut. Dissertation, 1982, 15 p. (KLD, 5/83, 7008)

68. Kazantsev, S.A. (0). Astrophysical and laboratory applications of self-accelerating effects. UFN, v. 139, no. 4, 1983, 621-666.

2. Molecular Beam and Ion

a. CO_2

69. Artamonov, A.V., V.G. Gontar', and S.A. Surguchenko (23). Determining the energy characteristics of the active media in CO_2 lasers by measuring the gain. KE, no. 6, 1983, 1088-1092.

70. Averin, A.P., N.G. Basov, Ye.P. Glotov, V.A. Danilychev, Yu.S. Leonov, A.M. Soroka, N.V. Cheburkin, and V.I. Yugov (1). Stabilization of the energy characteristics of an industrial c-w electroionization CO_2 laser by means of silica gel. KE, no. 6, 1983, 1264-1267.

71. Basov, N.G., Ye.P. Glotov, V.A. Danilychev, V.N. Koterov, A.M. Soroka, and N.V. Cheburkin (1). Increasing the electrical and operational characteristics of electroionization CO_2 amplifiers for laser thermonuclear fusion with cryogenic cooling of the active medium. DAN, v. 270, no. 3, 1983, 605-608.

72. Buechner, H.J., G. Zscherpe, and G. Thiede (NS). Pulsed attachment for a CO_2 laser. Feingerätetechnik, no. 12, 1982, 571-572. (RZhR, 5/83, 5Ye23)

73. Dankevich, N.P., N.V. Karlov, G.P. Kuz'min, A.A. Nesterenko, and Ye.V. Sisakyan (1). Optical strength of IR materials for pulsed CO_2 lasers with large areas of irradiation. KSpF, no. 6, 1983, 3-7.

74. Fedorov, S.V., and M.S. Yur'yev (0). Numerical study on thermal blooming in the active medium of an electroionization CO_2 laser. KE, no. 5, 1983, 1001-1006.

75. Gerasimov, V.F., and Yu.N. Moshin (23). Numerical calculation of the effect of inhomogeneities in the active gas medium in a fast-flow gas-discharge CO_2 mixing laser on radiation divergence. Institut atomnoy energii. Preprint, no. 3645/12, 1982, 16 p. (RZhF, 5/83, 5D1019)

76. Islamov, R.Sh., Yu.B. Konev, N.I. Lipatov, and P.P. Pashinin (1). Theoretical study on the characteristics of an active medium at 18.4 μm in a pulsed gas-discharge CO_2 laser at the 03^10-10^00 transition. Fizicheskiy institut AN SSSR. Preprint, no. 192, 1983, 28 p.

77. Korolenko, P.V., V.A. Spazhakin, and A.M. Khapayev (2). Effect of diffusion on the energy characteristics of molecular lasers. IVUZ Fiz, no. 5, 1983, 101-103.

78. Nguyen Tho Vuong (NS). Combined method for preionization and stabilization of a glow discharge for pumping a pulsed TEA-CO_2 laser. BWAT, no. 1, 1982, 105-112. (RZhF, 6/83, 6G366)

79. Nguyen Tho Vuong (NS). Study on the effect of impurities with a low ionization potential on the energy and discharge characteristics of a TEA CO_2 laser stabilized by preionization of the active medium. BWAT, no. 1, 1982, 113-120. (RZhF, 6/83, 6D1122)

80. Zaikin, A.P., V.I. Igoshin, and N.L. Kupriyanov (1). Theoretical study on a coolable c-w electroionization CO_2 laser. Fizicheskiy institut AN SSSR. Preprint, no. 198, 1983, 19 p.

b. CO

81. Babayev, I.K., N.G. Basov, Ye.P. Glotov, V.A. Danilychev, V.N. Koterov, V.V. Savel'yev, A.M. Soroka, N.V. Cheburkin, and V.I. Yugov (1). Evaluation of optimum modes of operation for c-w supersonic electroionization CO lasers. DAN, v. 270, no. 3, 1983, 600-604.

82. Basov, N.G., V.S. Kazakevich, I.B. Kovsh, and A.N. Mikryukov (1). Gain of the active medium in a pulsed electroionization CO laser. KE, no. 5, 1983, 1049-1051.

83. Basov, N.G., V.S. Kazakevich, I.B. Kovsh, and A.P. Lytkin (1). Spectrum of radiation from a pulsed electroionization CO laser with an intracavity water cell. KE, no. 6, 1983, 1121-1127.

84. Basov, N.G., V.G. Bakayev, A.A. Ionin, I.B. Kovsh, A.P. Lytkin, M.V. Pedanov, and D.V. Sinitsyn (1). Submicrosecond pulsed electroionization CO laser. KE, no. 6, 1983, 1261-1264.

85. Batyrbekov, G.A., S.A. Kostritsa, and M.U. Khasenov (444). Chemical processes in a $CO+N_2+He^3$ gas mixture plasma, mixed in the active zone of a nuclear reactor. KhVE, no. 3, 1983, 266-269.

86. Dolinina, V.I., I.B. Kovsh, and B.M. Urin (1). Theoretical study on the shape of an electroionization CO laser pulse. KE, no. 6, 1983, 1228-1232.

87. Lotkova, E.N., and V.V. Sokovikov (1). Changing the similarities between the gain and saturation parameters for the active medium of a gas discharge CO laser. KE, no. 5, 1983, 1026-1030.

c. Argon

88. Bakinovskiy, K.N., Ye.S. Voropay, V.T. Koyava, A.M. Sarzhevskiy, and G.V. Sharonov (334). Mode-locked argon laser with intracavity radiation extraction. PTE, no. 3, 1983, 159-162.

d. N_2

89. Gritsinin, S.I., I.A. Kossyy, V.P. Silakov, and N.M. Tarasova (1). Relaxation of vibrational energy after a pulsed microwave discharge in nitrogen. KSpF, no. 6, 1983, 13-17.

90. Rukhadze, A.A., V.P. Silakov, and A.V. Chebotarev (1). Propagation of transient shock waves in vibrationally excited nitrogen. KSpF, no. 6, 1983, 18-23.

e. I_2

91. Zuyev, V.S., L.D. Mikheyev, and A.P. Shirokikh (1). Tolerable heating of the medium and the specific energy output of an optically-pumped UV I_2 laser. KE, no. 5, 1983, 903-905.

f. Helium

92. Bunkin, F.V., V.M. Bystritskiy, V.I. Derzhiyev, A.N. Didenko, V.V. Korobkin, Ya.Ye. Karasik, G.Yu. Petrushchenko, S.S. Sulakshin, and S.I. Yakovlenko (1). Observation of stimulated emission at He II transitions under proton beam pumping. KE, no. 5, 1983, 1063-1065.

g. Submillimeter

93. Ganichev, S.D., S.A. Yemel'yanov, Ye.L. Ivchenko, Ye.Yu. Perlin, and I.D. Yaroshetskiy (4). Submillimeter multiphoton absorption in p-Ge. ZhETF P, v. 37, no. 10, 1983, 479-481.

h. Metal Vapor

94. Bukshpun, L.M., S.N. Atamas', V.V. Zhukov, Ye.L. Latush, and M.F. Sem (325). He-Sr laser with an average power of 3 W. IVUZ Fiz, no. 6, 1983, 105-107.

95. Gudkov, A.A., E.K. Karabut, and V.F. Kravchenko (325). Optimizing a self-restricting periodic-pulsed strontium vapor ion laser. IVUZ Fiz, no. 6, 1983, 104-105.

96. Isayev, A.A. (1), H. Kneipp, and M. Rentsch (GDR)(Russ translit: Kh. Knaypp, M. Rench). Spontaneous emission and gas temperature in a pulsed copper vapor laser. KE, no. 5, 1983, 967-973.

97. Isayev, A.A. (1), H. Kneipp, and M. Rentsch (GDR). Effect of the pulse repetition rate in a copper vapor laser. KE, no. 6, 1983, 1183-1190.

98. Kazakov, V.V., S.V. Markova, L.V. Molchanova, and G.G. Petrash (1). Double-pulse study on lasing in lead vapor. KE, no. 5, 1983, 954-961.

99. Litvinenko, A.Ya., V.I. Kravchenko, and A.N. Yegorov (5). Measuring the lifetimes of lower lasing levels in a copper vapor laser. KE, no. 6, 1983, 1212-1216.

100. Morozov, A.V., N.O. Pavlova, and V.V. Sakhin (113). Analysis on the occurrence of population inversion at LiI, CaII and ZnII levels in a recombining plasma. Deposit at VINITI, no. 328-83, 20 Jan 1983, 15 p. (DNR, 5/83, 621)

101. Sabotinov, N., and P. Telbizov (NS). Lasing at the ZnII line (758.8 nm) in a transverse high-frequency discharge. Bolgarskiy fizicheskiy zhurnal, no. 6, 1982, 667-672. (RZhF, 6/83, 6D1116)

102. Soldatov, A.N., and V.F. Fedorov (78). Copper vapor laser with stabilized output parameters. KE, no. 5, 1983, 974-980.

103. Zayakin, A.A., and I.I. Klimovskiy (74). Time dependence of electron concentration in the afterglow of copper halide lasers operating in a double pulsed mode. KE, no. 6, 1983, 1092-1097.

i. Gasdynamic

104. Bakanov, D.G., A.O. Kulikov, A.I. Odintsov, A.I. Fedoseyev, and V.F. Sharkov (23). Saturation in fast-flow CO_2 lasers. Institut atomnoy energii. Preprint, no. 3684/12, 1982, 14 p. (RZhF, 6/83, 6D1134)

105. Bakanov, D.G. (2). Optical methods for diagnostics of the active medium of a gasdynamic CO_2 laser and study on its lasing characteristics in the 16.2-18.4 μm region. Moskovskiy GU. Dissertation, 1982, 17 p. (KLD, 6/83, 8769)

106. Baranov, A.N., A.A. Vedeneyev, A.Yu. Volkov, A.I. Demin, and Ye.M. Kudryavtseva (1). Measuring the translational temperature in the jet of a CO_2 gasdynamic laser. Fizicheskiy institut AN SSSR. Preprint, no. 44, 1983, 18 p. (RZhF, 6/83, 6G359)

107. Butkovskiy, A.V., and G.Ya. Dynnikova (0). Structure of modes in a Fabry-Perot resonator of a gasdynamic CO_2 laser. TVT, no. 3, 1983, 561-566.

108. Gordiyets, V.F., and Yu.S. Shmotkin (1). Analytical description of condensations in cooled gas flows. Fizicheskiy institut AN SSSR. Preprint, no. 226, 1983, 52 p.

109. Islamov, R.Sh., Yu.B. Konev, and V.F. Sharkov (23). Study on the characteristics of a gasdynamic CO_2 laser at 18.4 μm. Institut atomnoy energii. Preprint, no. 3661/12, 1982, 19 p. (RZhF, 5/83, 5D1034)

110. Karpukhin, V.T., R.S. Konkashbayeva, N.B. Rodionov, S.M. Chernyshev, and V.F. Sharkov (74). Study on the gain in a CO_2 gasdynamic laser with wedge-shaped a profiled nozzles. Part 2. Results of measurement. Comparison of experimental and calculated data. I-FZh, v. 44, no. 5, 1983, 760-765.

3. Excimer

111. Adushkin, A.V., N.G. Basov, V.A. Danilychev, V.A. Dolgikh, O.M. Kerimov, Yu.F. Myznikov, and G.Yu. Tamanyan (1). Emission spectrum of a laser operating at the XeF(B) → XeF(X) transition under photolytic pumping of XeF_2. ZhTF P, no. 12, 1983, 757-760.

112. Bibinov, N.K., I.P. Vinogradov (12), V.S. Zuyev, A.V. Kanayev, L.D. Mikheyev, D.B. Stavrovskiy, and A.P. Shirokikh (1). Luminescence in excimers and excimer lasers with incoherent optical pumping. Sb 5, 51-111.

113. Gamzatov, N.M., A.V. Konyashchenko, A.N. Orayevskiy, and N.F. Starodubtsev (1). Simple electric discharge laser emitting in the UV, visible and IR spectral regions. PTE, no. 3, 1983, 164-165.

114. Krepostnov, P.I. (0). Theoretical study on the characteristics of an XeO laser pumped by open discharge radiation. KE, no. 5, 1983, 1061-1063.

115. Lakoba, I.S. (1). Amplification by single halides of radon. KSpF, no. 5, 1983, 14-17.

4. Theory

116. Belyanko, A.Ye., G.V. Bukin, N.I. Lipatov, V.A. Maslov, P.P. Pashinin, Yu.N. Polivanov, A.M. Prokhorov, V.V. Sakhanova, M.N. Timoshechkin, and V.Yu. Yurov (1). IR reflection and Raman spectra of single crystals and ceramics for hollow waveguides in the medium infrared. Fizicheskiy institut AN SSSR. Preprint, no. 177, 1983, 32 p.

117. Demkin, V.P., and A.N. Soldatov (0). Analysis of promising atomic transitions for obtaining self-limiting lasing. Deposit at VINITI, no. 732-83, 9 Feb 1983, 35 p. (RZhF, 6/83, 6D1139)

118. Gubin, M.A., V.M. Yermachenko, A.S. Kurlyandskiy, V.V. Nikitin, V.N. Petrovskiy, Ye.D. Protsenko, A.N. Rurukin, and A.S. Shelkovnikov (16). Eliminating mode competition in gas lasers. ZhETF, v. 84, no. 5, 1983, 1686-1694.

119. Korolenko, P.V., Ye.B. Perestoronina, and V.A. Spazhakin (2). Calculation of the output power and optimization of the parameters of gas laser resonators, allowing for diffusion. Deposit at VINITI, no. 365-83, 20 Jan 1983, 15 p. (RZhF, 5/83, 5D1016)

120. Lukashenko, V.I., and G.V. Pitatelev (298). Molecular spectrum of a discharge in lithium vapor. TVT, no. 3, 1983, 596-598.

121. Nekrasov, A.A., and A.A. Yakushev (0). Periodic pulsed flow-through gas laser. Otkr izobr, no. 21, 1983, 757096.

122. Tereshchenko, Ye.N., and N.Ya. Dodonova (12). Study on deactivation processes of electron-excited radicals in collisions with atomic and molecular gases. Sb 5, 112-145.

123. Varakin, V.N. (2). Study on resonant four-photon processes at vibrational transitions in molecular gases. Moskovskiy GU. Dissertation, 1982, 18 p. (KLD, 6/83, 8779)

D. CHEMICAL LASERS

1. $F_2+H_2(D_2)$

124. Borisov, V.M., A.M. Davidovskiy, S.G. Mamonov, and O.B. Khristoforov (0). Chemical HF laser initiated by a grazing discharge on a dielectric surface. KE, no. 5, 1983, 1065-1067.

2. Photodissociation

125. Bobrov, B.D. (7). Controlling the duration of radiation from a flashlamp-pumped photodissociation iodine laser by means of pulsed magnetic fields imposed on the active medium. Gos opticheskiy institut. Dissertation, 1982, (KLD, 6/83, 8773)

126. Danilov, O.B., A.P. Zhevlakov, and V.V. Lyubimov (0). Internal losses in a photodissociation iodine laser with a pulsed flashlamp. KE, no. 5, 1983, 961-966.

3. Transfer

127. Konoplev, N.A., A.A. Stepanov, and V.A. Shcheglov (1). Energy characteristics of a ring supersonic DF-CO_2 chemical laser with an unstable telescopic resonator. KE, no. 6, 1983, 1145-1150.

4. O_2+I_2

128. Azyazov, V.N., M.V. Zagidullin, V.I. Igoshin, and N.L. Kupriyanov (1). Calculating the radiation power of a chemical oxygen-iodine laser for resonators with a uniform field. Fizicheskiy institut AN SSSR. Preprint, no. 199, 1983, 35 p.

E. COMPONENTS

1. Resonators

a. Design and Performance

129. Ablekov, V.K., and V.G. Marchenko (0). Intracavity conversion of fields in planar wide-aperture resonators. DAN, v. 270, no. 3, 1983, 597-600.

130. Khramtsovskiy, I.A., and M.L. Razumnaya (7). Using a three-mirror resonator in a device for measuring radiation losses in optical elements. OMP, no. 5, 1983, 38-41.

131. Pokrovskiy, Yu.A. (208). Radiooptic theory of quasioptic devices. Deposit at VINITI, no. 708-83, 8 Feb 1983, 32 p. (RZhR, 6/83, 6Ye161)

b. Mode Kinetics

132. Pivtsov, V.S. (75). Effect of mode interaction on the characteristics of the output radiation from solid-state lasers. Institut avtomatiki i elektrometrii SOAN. Dissertation, 1982, 13 p. (KLD, 6/83, 8839)

2. Pump Sources

133. Arlantsev, S.V., Yu.F. Bondar', S.I. Zavorotnyy, A.L. Ipatov, G.P. Mkheidze, A.A. Ovchinnikov, and A.A. Savin (1). Study on the transport of a relativistic e-beam in a dense gas. Fizicheskiy institut AN SSSR. Preprint, no. 269, 1982, 27 p. (RZhF, 5/83, 5D1036)

134. Azizov, E.A., Yu.G. Gendel', B.V. Zakharov, B.V. Zhuravlev, A.L. Klopotovskiy, A.V. Mazulin, I.I. Pankov, A.V. Ponomarev, V.A. Yagnov, V.A. Krylov, and A.D. Frolov (0). Power supply system for multi-channel solid-state laser amplifiers. Sb 6, 75-82. (RZhF, 6/83, 6D979)

135. Gendel', Yu.G., B.V. Zhuravlev, and V.V. Semashko (0). Device for switching parallel circuits of sequentially-switched laser flashlamps. Otkr izobr, no. 22, 1983, 988150.

136. Muchnik, M.L., G.D. Parshin, and Ye.Ya. Chernyak (O). High-power nanosecond pulse generator for pumping copper vapor lasers. PTE, no. 3, 1983, 93-94.

137. Okunev, R.I., L.N. Pakhomov, V.Yu. Petrun'kin, and A.L. Stepanyants (29). Magnetothyristor pulse generator for pumping a copper vapor laser. ZhTF P, no. 11, 1983, 670-673.

138. Rozsa, K., G. Rubin, M. Janossy, P. Apai, and Fujii Kan-ichi (NS). Glow-to-arc transition in high-current Al hollow cathode discharges. Kozponti fizikai kutato intezet, no. 97, 1982, 11 p. (RZhF, 6/83, 6G292)

139. Zalesskiy, V.Yu. (O). Solar pumped iodine laser. KE, no. 6, 1983, 1097-1107.

3. Deflectors

140. Emdin, V.S. (7). Two-coordinate optical beam deflector. OMP, no. 6, 1983, 58-59.

4. Diffraction Gratings

141. Aleksandrovskiy, A.L. (13). Theory on diffraction of light by 3D phase gratings in birefringent crystals. Kristal, no. 3, 1983, 572-575.

142. Samokhin, A.A., V.A. Sychugov, A.V. Tishchenko, and A.A. Khakimov (1). Characteristics of periodic structure formation on solid surfaces during absorption of monochromatic radiation. KE, no. 5, 1983, 1039-1040.

143. Savitskiy, G.M., and I.V. Golubenko (7). Analysis of properties of holographic diffraction gratings. OMP, no. 6, 1983, 9-11.

5. Lenses

144. Grib, A.F., N.A. Gusak, V.Ye. Leparskiy, and A.G. Mashchenko (3). Electrooptic lens. Otkr izobr, no. 23, 1982, 938237. (RZhR, 5/83, 5Ye416)

6. Polarizers

145. Zhdanova, L.A., V.B. Ivanov, Ye.G. Pivinskiy, G.D. Pridatko, and D.S. Prilezhayev (7). Interference polarizers for lasers. OMP, no. 5, 1983, 36-38.

7. Mirrors

146. Duparré, A., and G. Schirmer (NS). Evaluating the quality of laser mirrors by means of a Fabry-Perot interferometer. Sb 7, 67-74. (RZhF, 6/83, 6D895)

147. Schaefer, D., G. Derrendoerfer, G. Szczepaneki, and R. Wolf (NS). Optical coatings for high power lasers. Sb 7, 137-145. (RZhF, 5/83, 5D795)

8. Detectors

148. Blaha, Vit. (NS). Device for detecting the position of a laser beam. Author's certificate Czechoslovakia, no. 202840, 15 Mar 1982. (RZhR, 5/83, 5Ye415)

149. Didykh, L.A., and L.S. Didykh (0). Dependence of the integral sensitivity of a bolometric laser radiation detector on the diameter of the incident beam. Sb 8, 110-115. (RZhF, 5/83, 5D758)

150. Dorozhkin, L.M., V.V. Lazarev, G.M. Pleshkov, B.A. Chayanov, Sh.Sh. Nabiyev, S.M. Nikiforov, E.M. Khokhlov, V.A. Chikov, V.D. Shigorin, and G.P. Shipulo (23). Thin-film pyroelectric detector based on organic compounds, for measuring the parameters of pulsed laser radiation. KE, no. 6, 1983, 1107-1113.

151. Kurbatov, L.N., M.N. Zargar'yants, and O.M. Grudin (0). Size of the sensitive region and photocurrent distribution in an integrated optical detector with coupled waveguides. KE, no. 6, 1983, 1273-1375.

152. Vanina, O.G., N.V. Ponomareva, Ye.I. Rukosuyev, and V.N. Khrabrov (110). Compensation of temperature drift in thermoelectric radiation detectors. Tr 2, 54-58.

153. Vasilevskiy, A.M., and A.A. Vostrov (110). Electrophoresis suspensions for coating of the detecting surfaces of thermoelectric detectors. Tr 2, 58-62.

154. Zolotaykin, A.V., V.M. Kuz'michev, and V.P. Balkashin (34). Bolometric laser detector. KE, no. 6, 1983, 1260-1261.

9. Modulators

155. Angelov, A.K., Ye.M. Zolotov, A.M. Prokhorov, and Ye.A. Shcherbakov (1). Study on a Mach-Zender interferometer type modulator using Ag:$LiTaO_3$ waveguides. Fizicheskiy institut AN SSSR. Preprint, no. 114, 1983, 14 p.

156. Angelov, A.K., Ye.M. Zolotov, A.M. Prokhorov, V.A. Chernykh, and Ye.A. Shcherbakov (0). E-O Bragg modulator based on a diffusion Ag:$LiTaO_3$ waveguide. IVUZ Radioelek, no. 5, 1983, 72-74.

157. Balakshiy, V.I., A.I. Nagayev, V.N. Parygin, and L.V. Shchekoturov (2). Space-time modulator of light. Otkr izobr, no. 29, 1982, 949617. (RZhR, 5/83, 5Ye175)

158. Bansyavichyus, R.Yu., A.V. Busilas, G.P. Kul'vetis, and K.M. Ragul'skis (104). Scanning device. Otkr izobr, no. 29, 1982, 949618. (RZhR, 5/83, 5Ye178)

159. Bredikhin, V.I., and S.P. Kuznetsov (426). Effect of anomalous biaxiality in KDP group crystals on the operation of electrooptic switches. Deposit at VINITI, no. 611-83, 3 Feb 1983, 22 p. (RZhF, 5/83, 5D824)

160. Demchuk, M.I., V.P. Mikhaylov, A.M. Prokhorov, I.N. Sisakyan, and A.F. Chernyavskiy (334). Passive film Q-switch for IR mode-locked lasers. KE, no. 5, 1983, 1051-1053.

161. D'yakonov, V.P., A.G. Kalinenko, V.M. Vatutin, M.D. Kontorov, and S.V. Babin (397). Modulators for semiconductor diode lasers triggered by a logic circuit. PTE, no. 3, 1983, 102-103.

162. Khomenko, A.V. (4). Study on photorefraction and light modulation in bismuth silicate crystals. Fiziko-tekhnicheskiy institut AN SSSR. Dissertation, 1982, 18 p. (KLD, 5/83, 7094)

163. Knyaz'kov, A.V. (29). Study on light modulation in transparent PLZT ceramic. Leningradskiy politekhnicheskiy institut. Dissertation, 1982, 15 p. (KLD, 6/83, 8793)

164. Krebs, A.R., and A.G. Kuznetsov (161). Pulse shaper for E-O modulators. PTE, no. 3, 1983, 104-105.

165. Mak, A.A., V.P. Pokrovskiy, L.N. Soms, and A.A. Tarasov (0). Polarization of radiation from solid state lasers with passive Q-switches. KE, no. 5, 1983, 918-925.

166. Malov, L.R., and R.I. Mukhtarov (0). Study on electrooptic modulation of radiation in the R(14) band of a 10.4 μm CO_2 laser by an ammonia-nitrogen mixture at moderate pressures. ZhPS, v. 38, no. 5, 1983, 844-846.

167. Metsik, V.M., E.E. Penzina, I.A. Parfianovich, L.M. Sobolev, V.V. Bryukvin, and O.P. Varnavskiy (313). Passive laser Q-switch. Otkr izobr, no. 19, 1983, 984374.

168. Mikhnov, S.A., A.N. Khodinskiy, and V.P. Khyuppenen (0). Effect of residual absorption in a switch on the efficiency of single-pulsed lasers. Deposit at VINITI, no. 1048-83, 25 Feb 1983, 5 p. (RZhF, 6/83, 6D1193)

169. Vasil'yev, A.A., I.N. Kompanets, and A.V. Parfenov (1). Achievements in the development and application of optically controlled liquid-crystal optical spatial modulators. KE, no. 6, 1983, 1079-1088.

170. Vladimirov, F.L., I.Ye. Morichev, and N.I. Pletneva (0). Time characteristics of liquid-crystal optical modulators using the S-effect. ZhTF, no. 6, 1983, 1225-1226.

171. Vlasov, R.A., and V.V. Pastushenko (3). Method for obtaining a scanning light beam. Otkr izobr, no. 16, 1982, 890853. (RZhR, 5/83, 5Ye179)

172. Vodop'yanov, K.L., I. Kertesz, and A.A. Malyutin (1). Formation of polarization states in a resonator with a partial polarizer and a phase plate. KE, no. 5, 1983, 980-984.

F. NONLINEAR OPTICS

1. Frequency Conversion

173. Aktsipetrov, O.A., Ye.D. Mishina, and A.V. Petukhov (2). Electroreflection in silver during giant second harmonic generation. ZhETF P, v. 37, no. 12, 1983, 592-594.

174. Aktspetrov, O.A., V.Ya. Bartenev, Ye.D. Mishina, and A.V. Petukhov (2). Giant Raman scattering and second harmonic generation on surfaces. KE, no. 6, 1983, 1113-1120.

175. Alimpiyev, S.S., V.V. Vologin, N.V. Karlov, S.M. Nikiforov, B.G. Sartakov, E.M. Khokhlov, A.L. Shtarkov, and V.E. Shubin (1). Experimental study on the spectrum of third harmonic generation in a gasdynamically cooled SF_6 gas. Fizicheskiy institut AN SSSR. Preprint, no. 123, 1983, 26 p.

176. Arkhipkin, V.G., and Yu.I. Geller (30). Effect of multiphoton ionization on nonlinear frequency conversion in gas. KE, no. 6, 1983, 1243-1252.

177. Goncharov, I.G., A.P. Grachev, K.B. Dedushenko, M.V. Zverkov, and A.A. Kirillovich (16). Effect of external feedback on frequency tuning of a semiconductor laser. KE, no. 5, 1983, 1019-1021.

178. Karamzin, Yu.N., and I.L. Tsvetkova (71). Numerical method for solving the problem of second harmonic generation, allowing for thermal self-action. Institut prikladnoy matematiki AN SSSR. Preprint, no. 156, 1982, 29 p. (RZhF, 5/83, 5D1148)

179. Rostovtseva, V.V., and A.P. Sukhorukov (2). Effect of thermal blooming on second harmonic generation in beams with elliptical cross-sections. KE, no. 6, 1983, 1253-1256.

180. Solomonov, Yu.F., and V.K. Subashiyev (0). Study of the third-order nonlinear susceptibility in GaSe. PSS, v. A74, no. 1, 1982, 75-78. (RZhF, 6/83, 6D1198)

181. Zhiliba, A.I. (0). Quantum statistical calculation of the amplitude distribution function in second harmonic generation. Sb 9, 15-21. (RZhF, 6/83, 6D1220)

2. Parametric Processes

182. Lapin, V.G. (0). Threshold of a parametric process in a randomly inhomogeneous medium at a mirror. IVUZ Radiofiz, no. 9, 1982, 1088-1090. (RZhF, 5/83, 5Zh23)

183. Vo Khong An' (52). Theory of parametric excitation of high-power electromagnetic radiation in crystals. Ob"yedinennyy institut yadernykh issledovaniy. Dissertation, 1982, 19 p. (KLD, 5/83, 6917)

3. Stimulated Scattering

a. Raman

184. Gorbunov, L.M., and A.S. Shirokov (1). Stimulated Raman scattering during oblique incidence of light on an inhomogeneous plasma. Fizika plazmy, no. 3, 1983, 508-511.

185. Gorelik, V.S., V.B. Divak, and M.M. Sushchinskiy (1). Raman scattering of light by surface phonons in gallium phosphide powder. KSpF, no. 6, 1983, 29-32.

b. Brillouin

186. Akatov, L.L., Yu.V. Aristov, and V.M. Rysakov (4). Using the Franz-Keldysh effect to control stimulated scattering of light in CdS with acoustic instability in the 50 GHz range. FTT, no. 5, 1983, 1517-1519.

187. Bazarov, Ye.N., and A.T. Polukhin (15). Stimulated Brillouin scattering in a distorted single-mode fiber lightguide. KE, no. 6, 1983, 1283-1285.

188. Rysakov, V.M., L.L. Akatov, and Yu.V. Aristov (0). Threshold for controlled stimulated Franz-Keldysh scattering of light in piezo-semiconductors with acoustic instability. ZhTF P, no. 10, 1983, 621-624.

c. Rayleigh

189. Nedbayev, N.M., M.S. Tunin, and M.I. Shakhparonov (2). Rayleigh scattering of light in quinoline and its solutions. ZhFKh, no. 6, 1983, 1416-1419.

d. Miscellaneous Scattering

190. Afanas'yev, A.A., and B.A. Samson (0). Resonant four-photon stimulated scattering of light in a spatially periodic pump field. ZhPS, v. 38, no. 5, 1983, 748-752.

191. Arutyunyan, V.M., T.A. Papazyan, S.M. Sarkisyan, S.P. Ishkhanyan, I.G. Arutyunyan, and A.R. Aramyan (0). Stimulated conical scattering of light in sodium vapor. ZhPS, v. 38, no. 6, 1983, 983-988

4. Self-focusing

192. Gorbunov, L.M. (1). Spectrum of reflected radiation during self-focusing of light in a laser plasma. ZhETF, v. 84, no. 5, 1983, 1615-1622.

5. Acoustic Interaction

193. Andreyeva, N.P., F.V. Bunkin, D.V. Vlasov, K. Karshiyev, Yu.A. Kravtsov, and Ye.A. Shurygin (1). Experimental observation of self-focusing of sonic beams during interaction with the surface of a liquid. Fizicheskiy institut AN SSSR. Preprint, no. 163, 1983, 7 p.

194. Balakshiy, V.I., and V.N. Parygin (0). Study on the structure of a light field by an acoustooptic method. Sb 10, 28-35.

195. Bayramov, B.Kh., A.V. Gol'tsev, E. Karayamaki, R. Laykho, T. Levola, and V.V. Toporov (4). Resonant Brillouin scattering of light by hot acoustic phonons in ZnSe crystals. FTT, no. 5, 1983, 1286-1294.

196. Bazarov, Ye.N., and A.T. Polukhin (15). Induced acoustooptic interaction in a distorted single mode fiber lightguide. ZhTF, no. 6, 1983, 1096-1100.

197. Bessonov, A.F., L.N. Deryugin, and V.A. Komotskiy (0). Fiberoptic signal readout for SAW devices. RiE, no. 5, 1983, 984-992.

198. Galstyan, A.M. (1). Laser excitation of nonlinear acoustic pulses in a liquid. Fizicheskiy institut AN SSSR. Dissertation, 1983, 20 p.

199. Khodinskiy, A.N., L.S. Korochkin, and S.A. Mikhnov (0). Properties of ultrasonic vibrations arising in a solid under the effect of pulsed laser radiation. ZhPS, v. 38, no. 5, 1983, 745-748.

200. Lyamshev, L.M., and B.I. Chelnokov (21). Generation of sound in solids by penetrating radiation. Akusticheskiy zhurnal, no. 3, 1983, 372-381.

201. Pentrun'kin, V.Yu., I.A. Vodovatov, and K.V. Vetrov (0). Diffraction of light by ultrasound. Sb 10, 51-59.

202. Vernigorov, N.S., A.Ya. Demidov, A.V. Pugovkin, and L.Ya. Serebrennikov (0). Panoramic acoustooptic detector frequency meters. Sb 10, 35-40.

6. General Theory

203. Bagayev, S.N., S.V. Mal'tsev, and V.P. Chebotayev (159). Nonlinear resonant shift in methane at the E-line (ν_3 band P(7) transition). ZhETF P, v. 37, no. 10, 1983, 495-498.

204. Brovkovich, V.G., and B.I. Sturman (710,75). Observation of nonequilibrium diffusion in $LiNbO_3$ crystals. ZhETF P, v. 37, no. 10, 1983, 464-467.

205. Danileyko, Yu.K., T.P. Lebedeva, A.M. Prokhorov, and A.V. Sidorin (1). Dynamic nonlinear optical absorption in solids. ZhETF, v. 84, no. 6, 1983, 2032-2039.

206. Dubetskiy, B.Ya. (159). Nonlinear resonance in a system of separated optical fields with the quadratic Doppler effect and recoil factored in. KE, no. 6, 1983, 1203-1212.

207. Fomin, V.M., S.N. Klimin, and Ye.P. Pokatilov (151). Nonlinear optical effects in semiconductors related to the coherence of probing and intense e-m radiation. FTP, no. 5, 1983, 916-920.

208. Galant, V.Ye., G.T. Petrovskiy, and L.N. Urusovskaya (7). Nonlinear refractive index for fluorophosphate glass. FiKhS, no. 3, 1983, 325-328.

209. Gora, V.D., Yu.N. Karamzin, V.I. Pustovoy, and A.K. Sukhorukova (71). Excitation of polaritons by short pulses and focused beams. Institut prikladnoy matematiki AN SSSR. Preprint, no. 172, 1982, 26 p. (RZhF, 6/83, 6D1228)

210. Gorelik, V.S., L.G. Reznik, B.S. Umarov, V.T. Gabriyelyan, and E. Kokanyan (1). Effect of impurities on the spectrum of polariton Raman scattering in lithium niobate crystals. FTT, no. 6, 1983, 1836-1837.

211. Gur'yanov, A.N., D.D. Gusovskiy, Ye.M. Dianov, E.A. Zakhidov, and A.Ya. Karasik (1). Stimulated four-photon mixing in glass fiber lightguides in the 0.4 - 1.8 μm spectral region. KE, no. 5, 1983, 1056-1059.

212. Hajto, J., and I. Janossy (NS). Optical bistability observed in amorphous semiconductor films. Kozponti fizikai kutato intezet, no. 53, 1982, 25 p. (RZhF, 5/83, 5D1142)

213. Henneberger, F., and V. May (NS). Nonlinear optical response and retarded photon self-energy. (Part of a continuing mutual criticism with S. Schmitt-Rink and H. Haug). PSS, v. B113, no. 2, 1982, K147-K151. (RZhF, 5/83, 5D999)

214. Idiatulin, V.S. (0). Diffraction efficiency of a 3D phase grating induced by optical pulses in a nonlinear medium. OiS, v. 54, no. 5, 1983, 855-860.

215. Ivleva, Ye.I., V.V. Korobkin, and V.N. Sazonov (1). Propagation of high-power beams with small-scale spatial modulations in amplitude and phase in nonlinear media. KE, no. 6, 1983, 1178-1183.

216. Kamalov, V.F., and Yu.P. Svirko (2). Cross-section of two-photon absorption in F_2^+ centers of alkali halide crystals. VMU, no. 1, 1983, 38-41. (RZhF, 6/83, 6D1203)

217. Karamzin, Yu.N. (71). Numerical methods for various problems in nonlinear optics. Institut prikladnoy matematiki AN SSSR. Preprint, no. 73, 1982, 25 p. (RZhF, 5/83, 5D1195)

218. Kirilenko, Ye.K., S.A. Lesnik, and A.I. Khizhnyak (5). Interaction and self-action of laser beams in sodium vapors. UFZh, no. 6, 1983, 935-937.

219. Kodirov, M.K., V.F. Lukivykh, and V.V. Slabko (210). Cuvette atomizer with a heat pipe for experiments on nonlinear optics in gases. Institut fiziki SOAN. Preprint, no. 221, 1983, 14 p. (RZhF, 5D867)

220. Makhviladze, T.M., and M.Ye. Sarychev (1). Raman scattering of light by phonon solitons in crystals. FTT, no. 6, 1983, 1717-1719.

221. Maslennikov, V.L., A.M. Prokhorov, V.A. Sychugov, and A.V. Tishchenko (1). Diffraction of a high-power light wave by the corrugated interface of two media. ZhTF P, no. 11, 1983, 679-682.

222. Pazdzerskiy, V.A., V.I. Usachenko, and V.A. Yurovskiy (227). Multiphoton absorption of an e-m wave pulse in plasma. IVUZ Fiz, no. 5, 1983, 60-65.

223. Reshetin, V.P. (0). Stochastic reflection from nonlinear dielectrics and interference mirrors. Sb 11, 76-93. (RZhF, 5/83, 5D1196)

224. Schmitt-Rink, S., and H. Haug (NS). Nonlinear optical response and optical bistability due to excitonic molecules. (Part of a continuing mutual criticism with F. Henneberger and V. May). PSS, v. B113, no. 2, 1982, K143-K145. (RZhF, 5/83, 5D1000)

225. Shalayev, V.M. (210). Nonlinear optical processes during elimination of Doppler broadening. Institut fiziki SOAN. Dissertation, 1982, 17 p. (KLD, 6/83, 8872)

226. Spasov, A.Y., and P.G. Georgiev (NS). Method for analysis of nonlinear oscillations. Bolgarskiy fizicheskiy zhurnal, no. 5, 1982, 497-502. (RZhF, 6/83, 6D1074)

227. Spasov, A.Y., and P.G. Georgiev (NS). Method for analysis of nonlinear waves. Bolgarskiy fizicheskiy zhurnal, no. 5, 1982, 502-509. (RZhF, 6/83, 6D1075)

228. Zel'dovich, B.Ya., N.F. Pilipetskiy, and A.V. Sukhov (17). Dependence of giant optical nonlinearity in planar oriented nematics on specimen thickness. KE, no. 5, 1983, 1022-1023.

229. Zhidkov, A.G., and S.I. Yakovlenko (23). Narrowing of a high-power light pulse in a medium with optical-collisional nonlinearity. KE, no. 5, 1983, 912-918.

G. SPECTROSCOPY OF LASER MATERIALS

230. Bazilevskaya, T.A., V.T. Gritsyna, B.I. Minkov, and O.A. Fakeyeva (0). Effect of activator concentration on the distribution of luminescence line intensities in YAG:Nd crystals. Deposit at VINITI, no. 828-83. (ZhPS, v. 38, no. 6, 1983, 1022)

231. Bonchkovskiy, B.I. (188). Experience in using temperature effects in absorption spectrometric determination of Nd^{3+} in YAG crystals. Tr 3, 29-32. (RZhF, 6/83, 6D890)

232. Kamarzin, A.A., A.A. Mamedov, V.A. Smirnov, V.V. Sokolov, Yu.P. Timofeyev, and I.A. Shcherbakov (1). Concentration quenching and quantum yield of luminescence from Nd^{3+} in γ-La_2S semiconductor crystals and $La_2S_3 \cdot 2Ga_2O_3$ glass. Fizicheskiy institut AN SSSR. Preprint, no. 7, 1983, 17 p. (RZhF, 5/83, 5D659)

233. Kvapil, Jos., J. Kvapil, J. Kubelka, and R. Autrata (NS). Role of iron ions in YAG and yttrium aluminate. Crystal Research and Technology [GDR], no. 1, 1983, 127-131. (RZhF, 6/83, 6D722)

234. Levshin, L.V., A.M. Saletskiy, and V.I. Yuzhakov (0). Characteristics of pump energy migration in multicomponent spectrally inhomogeneous dye solutions. OiS, v. 54, no. 5, 1983, 807-813.

235. Levshin, L.V., A.P. Golovina, G.A. Ketsle, V.V. Bryukhanov, and V.K. Runov (0). Study on photophysical processes in ionic associates of rhodamine dyes with organic ligands. ZhPS, v. 38, no. 5, 1983, 759-764.

236. Lisitsyna, L.A., Ye.P. Chinkov, V.M. Reyterov, and L.M. Trofimova (0). Optical absorption spectra for CaF_2 crystals doped with yttrium and sodium fluorides. ZhPS, v. 38, no. 6, 1983, 934-937.

237. Meyl'man, M.L., A.I. Kolomiytsev, I.S. Volodina, A.G. Smagin, Kh.S. Bagdasarov, and A.M. Kevorkov (0). Determining the concentration of neodymium in YAG crystals by absorption spectroscopy. ZhPS, v. 38, no. 5, 1983, 755-759.

238. Nizamov, N., K.U. Umarov, R.Kh. Dzhumadinov, and A.K. Amakhodzhayev (0). Study on spectral-fluorescent and photochemical properties of acridine and oxazine dyes and other related compounds. OiS, v. 54, no. 6, 1983, 1013-1018.

239. Nosenko, A.Ye., L.V. Kostik, and V.A. Sen'kiv (0). Optical properties of $Ca_3Ga_2Ge_3O_{12}$ single crystals. Sb 12, 76-78. (RZhF, 6/83, 6D717)

240. Szymanski, M. (NS). Measurement of luminescence quantum yield of stoichiometric laser materials by the modified Vavilov method. APP, v. A63, no. 1, 1983, 59-65. (RZhF, 6/83, 6D713)

H. ULTRASHORT PULSE GENERATION

241. Finkel'shteyn, K.I., and A.I. Fomichev (0). Method for generating a train of ultrashort radiation pulses. Otkr izobr, no. 24, 1983, 824852.

J. CRYSTAL GROWING

242. Bagdasarov, Kh.S. (0). Growing high-melt single crystals for lasers and other applications. AN SSSR. Vestnik, no. 6, 1983, 66-74.

243. Bagdasarov, Kh.S., V.T. Gabriyelyan, E.P. Kokanyan, N.Z. Sarkisyan, Ye.M. Uyukin, and S.K. Arora (0). Feasibility of controlling the photorefractive and photoelectric properties of $LiNbO_3$:Fe crystals during growth. ZhTF P, no. 12, 1983, 719-722.

244. Radautsan, S.I., Ye.V. Russu, V.G. Smirnov, M.B. Kokhanyuk, and V.M. Botnaryuk (44). Gas phase epitaxy of InP-$In_xGa_{1-x}As$ heterostructures by a chloride method. Sb 2, 209.

245. Syrbu, A.V. (415). Selective liquid epitaxy of InP, InGaAs and InGaAsP. Sb 2, 159.

K. THEORETICAL ASPECTS OF ADVANCED LASERS

246. Baciu, G., M. Grecescu, D. Martin, V. Niculescu, and A. Radu (NS). Study on the electron movement in a free-electron laser with combined helical and axial magnetic fields. Sb 3, 39-40. (RZhR, 5/83, 5Ye14)

247. Baciu, G., M. Grecescu, D. Martin, V. Niculescu, A. Nitoiu, and A. Radu (NS). Influence of the electron current density on the instability regime of a free-electron laser with combined helical and axial magnetic fields. Sb 3, 41-42. (RZhR, 5/83, 5Ye59)

248. Badalyants, G.R., A.Ye. Martirosyan, and V.O. Papanyan (0). Possibility of VUV and soft x-ray laser action. Sb 3, 43-44. (RZhR, 5/83, 5Ye170)

249. Bogachenkov, V.A., V.L. Bratman, G.G. Denisov, A.A. Kolomenskiy, M.M. Ofitserov, V.A. Papadichev, M.I. Petelin, I.V. Sinil'shchikova, and O.A. Smit (1). Experimental study on a free electron maser. KSpF, no. 6, 1983, 38-41.

250. Genian, A. (NS). Free electron laser: amplification in the laser theory of weak signals. Zeszyty naukowe Instytutu maszyn przeplywowych PAN Gdansku, Stud. mater., no. 120, 1981, 44 p. (RZhF, 5/83, 5D1002)

251. Roshal', A.S., and V.I. Abramov (0). Mathematical model for a free electron laser. Sb 13, 99-104.

252. Vysotskiy, V.I., and R.N. Kuz'min (51). Stimulated thresholdless x-ray and gamma radiation using a quantum undulator in real zeolites. FTT, no. 5, 1983, 1397-1400.

L. GENERAL LASER THEORY

253. Aliyev, V.A., V.V. Grigor'yants, N.A. Groshenko, and B.M. Temirov (435). Feasibility of making a thin-film distributed feedback laser with a gyroanisotropic resonator. ZhTF, no. 5, 1983, 962-964.

254. Arkhipkin, V.G., and Yu.I. Geller (210). Amplification of radiation without population inversion at transitions to self-ionization states. Institut fiziki SOAN. Preprint, no. 223F, 1983, 10 p. (RZhF, 6/83, 6D1103)

255. Babin, A.A., A.V. Karov, and G.I. Freydman (426). Non-steady-state operation in a two-pass amplifier. KE, no. 5, 1983, 1033-1036.

256. Basov, N.G. (0). Quantum electronics and philosophy. Sb 14, 111-124. (RZhF, 6/83, 6A2)

257. Belenov, E.M., V.L. Velichanskiy, A.S. Zibrov, V.V. Nikitin, V.A. Sautenkov, and A.V. Uskov (1). Methods for narrowing the lasing line in an injection laser. KE, no. 6, 1983, 1232-1243.

258. Borovskiy, A.V., F.V. Bunkin, V.I. Derzhiyev, A.G. Zhidkov, and S.I. Yakovlenko (1). Effect of reabsorption on population inversion at hydrogen ion levels in a supercooled plasma. Fizicheskiy institut AN SSSR. Preprint, no. 189, 1983, 37 p.

259. Boyko, B.B., N.I. Insarova, G.I. Olefir, and N.S. Petrov (0). Lasing kinetics of lasers with a thin absorbing layer in the resonator. ZhPS, v. 38, no. 5, 1983, 737-742.

260. Bukhenskiy, M.F., and B.F. Polkovnikov (0). Fourth International Conference on Lasers and Their Applications, Leipzig, 19-23 Oct 1981. KE, no. 6, 1983, 1290-1296.

261. Bykov, V.P., and G.V. Shepelev (1). Interference of radiation from two independent lasers. Fizicheskiy institut AN SSSR. Preprint, no. 149, 1983, 17 p.

262. Fazliyev, A.Z. (0). Semiclassical representation. Part 1. Obtaining anti-normal-ordered operators. Sb 9, 4-8. (RZhF, 6/83, 6D1072)

263. Fazliyev, A.Z. (0). Semiclassical representation. Part 2. Evaluating quantum corrections. Sb 9, 8-14. (RZhF, 6/83, 6D1073)

264. Grigor'yev, V.P. (0). Stimulated emission from a magnetized intense e-beam with cyclotron resonance of the pump wave. RiE, no. 5, 1983, 960-964.

265. Ivanov, V.N. (0). Wave function fluctuations and quantum states. Sb 9, 33-39. (RZhF, 6/83, 6D1083)

266. Krochik, G.M., and N.M. Krochik (0). Resonant multiphoton interaction of noise radiation with a generalized two-level system. IVUZ Radiofiz, no. 9, 1982, 998-1011. (RZhF, 5/83, 5Zh25)

267. Ledneva, G.P., and Yu.I. Chekalinskaya (3). Amplification of pulsed signals by regenerative and superregenerative laser amplifiers. Institut fiziki AN BSSR. Preprint, no. 273, 1982, 30 p.

268. Luchnikov, L.A. (254). Quantum theory of resonance processes. Part 1. Kinematic description of an elementary act of stimulated emission. Deposit at VINITI, no. 600-83, 2 Feb 1983, 15 p. (DNR, 5/83, 639)

269. Miller, D.A.B. (NS). Optical bistability. CCF, v. A32, no. 6, 1982, 582-596. (RZhF, 5/83, 5D979)

270. Nosach, O.Yu., and Ye.P. Orlov (1). Effect of refraction losses on the characteristics of laser radiation. KE, no. 5, 1983, 932-943.

271. Orayevskiy, A.N. (0). Masers, lasers and other wonders. CCF, v. A33, no. 1, 1983, 35-50. (RZhR, 6/83, 6Ye5)

272. Popescu, I.M., P.E. Sterian, and E.N. Stefanescu (NS). Possibility of amplification by optoelectronic devices based on the optical bistability effect. SCF, no. 10, 1982, 905-920. (RZhF, 5/83, 5D793)

273. Ter-Mikayelyan, M.L., and V.O. Chaltykyan (0). Two-photon decay of a three-level atom in a field of two strong radiations resonant with atomic transitions. AN ArmSSR. Doklady, no. 4, 1982, 170-175. (RZhF, 6/83, 6D1100)

274. Vlachy, J. (NS). Trends in Czechoslovak physics research: manpower, publication output, citation response. CJP, v. B32, no. 2, 1982, 1407-1414. (RZhF, 5/83, 5A29)

275. Vul, B.M., L.V. Keldysh, V.A. Kotel'nikov, A.A. Logunov, M.A. Markov, S.I. Nikol'skiy, A.F. Plotnikov, A.M. Prokhorov, and D.V. Skobel'tsyn (1). To Nikolay Gennadiyevich Basov (1) on his 60th birthday. UFN, v. 138, no. 4, 1982, 683-684. (RZhF, 5/83, 5A17)

276. Zatsepin, S.V. (1). Excitation of a quantum nonlinear oscillator with fast relaxation of the phase of a nonmonochromatic external force. Fizicheskiy institut AN SSSR. Preprint, no. 293, 1982, 26 p. (RZhF, 5/83, 5Zh24)

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

277. Akopyan, V.S., and N.M. Drozdova (417). Single-pulsed laser iridectomy. Vestnik oftal'mologii, no. 4, 1981, 15-17.

278. Bunin, A.Ya., A.F. Brovkina, V.N. Yermakova, and N.V. Makarskaya (740). Laser coagulation of intraocular tumors and prevention of the reactive hypertension syndrome. Vestnik oftal'mologii, no. 3, 1983, 55-57.

279. Kipenskiy, A.A., and S.V. Savel'yev (0). Using CO_2 lasers in suppurative surgery. Kazanskiy meditsinskiy zhurnal, no. 6, 1983, 452.

280. Komarova, A.A., D.A. Ginzburg, V.P. Zotkina, R.M. Khvastunov, Ye.M. Terent'yeva, and S.G. Chernaya (381). Automatic EEG examinations of people working with laser devices. Gigiyena i sanitariya, no. 6, 1983, 51-54.

281. "Romashka-1" laser surgical device. Voyenno-meditsinskiy zhurnal, no. 5, 1983, inside front cover.

282. Saprykin, P.I., and A.Yu. Kalent'yev (596). Laser microsurgery of the organic pupillary block. Oftal'mologicheskiy zhurnal, no. 3, 1983, 160-162.

283. Sebrant, Yu.V., O.A. Ternovskiy, and V.A. Krylov (0). Laser radiation. Chapter in book: Gigiyena truda pri vozdeystvii elektromagnitnykh poley (Labor hygiene under the effect of electromagnetic fields). Edited by V.Ye. Kovshilo (0). Moskva, Meditsina, 1983, 61-81.

284. Shaposhnikova, N.F., and V.I. Klepikov (0). Conference on coordination of research in the area of laser applications in medicine. Sovetskaya meditsina, no. 9, 1982, 122-123.

285. Skobelkin, O.K., Ye.I. Brekhov, G.D. Litvin, V.I. Korepanov, V.A. Matafonov, and B.P. Kudryavtsev (0). Resectioning the pancreas by a CO_2 laser beam. Voyenno-meditsinskiy zhurnal, no. 1, 1983, 69.

286. Suvorov, I.M., V.V. Dobrynina, I.N. Ushkova, L.N. Lychakova, and T.I. Sushentsova (743). Effect of laser radiation on the human organism. Vrachebnoye delo, no. 9, 1981, 10-15.

287. Tupikin, G.V., V.P. Gurbanov, A.Yu. Sebrant, and M.A. Stepanova (218). Device for determining the degree of laser beam penetration into an organism. Otkr izobr, no. 28, 1982, 946559.

288. Udod, V.M., V.T. Storozhuk, E.G. Karsten, A.A. Utemisov, and S.I. Markelov (741). Comprehensive treatment of purulent wounds by CO_2 laser processing. Sovetskaya meditsina, no. 5, 1983, 51-52.

289. Ushkova, I.N., and E.A. Dvorkin (743). Approaches to regulating maximum allowable levels of scattering for c-w laser radiation. Gigiyena truda i professional'nyye zabolevaniya, no. 6, 1983, 48-49.

290. Zalesskiy, V.N. (225). Photosensitizing effect of argon laser radiation on tumors. Institut problem onkologii AN UkrSSR. Dissertation, 1982, 23 p. (KLD, 5/83, 8003)

291. Zheltov, G.I., and V. Andreichev (0). Physical models of laser radiation interaction with the fundus tissues. Sb 3, 425-426. (RZhR, 5/83, 5Ye597)

292. Zubkova, S.M., I.N. Danilova, and T.M. Kamenetskaya (0). All-Union Conference on Applications of Methods and Means of Laser Technology in Biology and Medicine, Kiev, 24-26 Sep 1979. Voprosy kurortologii fizioterapii i lechebnoy fizicheskoy kultury, no. 6, 1980, 65-67.

B. COMMUNICATIONS SYSTEMS

293. Aksenov, Ye.T., A.V. Kukharev, A.A. Lipovskiy, and A.V. Pavlenko (0). Diffuse lithium-niobate waveguide acoustooptic devices for signal processing. Sb 10, 59-67.

294. Aleksandrov, I.V., M.Ye. Zhabotinskiy, and O.Ye. Shushpanov (15). Method for processing fiber lightguides. Otkr izobr, no. 10, 1982, 932357. (RZhR, 5/83, 5Ye372)

295. Aleksandrov, I.V., M.Ye. Zhabotinskiy, and O.Ye. Shushpanov (0). Reliability of graded-index lightguides. IVUZ Radioelek, no. 5, 1983, 67-70.

296. Andriyesh, A.M. (44). Chalcogenide glassy semiconductor fiber and planar optical waveguides. Sb 2, 9-10.

297. Andriyesh, A.M., O.V. Luksha, A.V. Mironos, V.V. Ponomar', and A.S. Smirnova (44). Structural characteristics of optical waveguides consisting of As-Ge-S(Se) system materials. Sb 2, 229.

298. Andrushko, L.M., and K.P. Naumenko (0). Synthesis of two-mode circular dielectric waveguides. IVUZ Radioelek, no. 5, 1983, 95-96.

299. Artyushin, L.F., O.I. Ioshin, O.G. Ovilko, and B.A. Moskalev (231). Device for image recording by laser. Otkr izobr, no. 24, 1982, 940126. (RZhR, 5/83, 5Ye458)

300. Arutyunyan, E.A., V.V. Il'in, L.S. Lebedev, V.V. Morozov, and Ye.K. Skaletskiy (59). Optical waveguides in YAG:Nd^{3+} produced by ion implantation. ZhTF P, no. 9, 1983, 549-551.

301. Ayunts, Yu.Kh., and A.P. Kryukov (0). Wideband fiberoptic communications line for transmission of telemetric information. IVUZ Radioelek, no. 5, 1983, 92-93.

302. Bachevskiy, R.S., G.I. Gas'kevich, B.V. Gordechnyy, L.I. Muravskiy, and A.G. Kuts' (81). Photolayers as coherent optical signal recorders. Sb 15, 12-13. (RZhF, 6/83, 6D1027)

303. Bagrikov, Yu.V., N.B. Ivanov, and L.I. Skvortsov (0). Device for transmitting and receiving information on optical communications channels. Otkr izobr, no. 9, 1983, 1003129.

304. Belanov, A.S. (0). Theory of fiber lightguides. Sb 16, 283-320. (RZhF, 6/83, 6D290)

305. Belov, A.V., and V.B. Neustruyev (0). Metrics of multimode fiber lightguides and questions of measurement standardization. IVUZ Radioelek, no. 5, 1983, 18-26.

306. Belovolov, M.I., A.N. Gur'yanov, D.D. Gusovskiy, and A.P. Kryukov (0). Single-mode fiberoptic lightguide communications line with a capacity of 400 Mbit/sec. IVUZ Radioelek, no. 5, 1983, 76-77.

307. Berkovskiy, B.P., V.I. Kosyakov, N.V. Remizov, A.Sh. Tukhvatulin, and I.Yu. Khanukov (29). Simulating the effect of graded-index lenses in fiberoptic devices. ZhTF, no. 6, 1983, 1170-1172.

308. Biryulin, Yu.F., V.V. Chaldyshev, and Yu.V. Shmartsev (4). Quantum yield of photoluminescence in $GaAs_{1-x}Sb$. Sb 2, 168.

309. Borshchagovskiy, Ye.G., K.K. Sevost'yanov, and V.P. Loginov (118). Noise detection in a dynamic system described by a "sliding average" model. Sb 17, pp not given. (RZhF, 6/83, 6Zh3)

310. Bozyk, M. (NS). Interferometric measurement of optical glass fiber refractive profiles $n(r)$ employing the zonal approximation method. Opt app, no. 1, 1982, 119-121. (RZhF, 6/83, 6D960)

311. Buachidze, Z.E., I.V. Vasilishcheva, V.N. Morozov, V.A. Pletnev, A.S. Semenov, and P.V. Shapkin (0). Research and development of optically controlled CdS_xSe_{1-x} thin-film waveguides. Sb 16, 275-280. (RZhF, 6/83, 6D321)

312. Butusov, M.M., N.V. Yermakova, and N.L. Urvantseva (0). Dependence of fiberoptic sensor sensitivity on the characteristics of the fiber and the construction of the sensing element. IVUZ Radioelek, no. 5, 1983, 81-82.

313. Bykov, A.M., A.V. Volyar, S.F. Glagolev, and V.P. Zubkov (435). Characteristics of the Faraday effect in multimode strip lightguides. ZhTF, no. 5, 1983, 929-931.

314. Chashchin, V.S. (7). Holographic Fourier spectroscopy with an additional light source. Gos opticheskiy institut. Dissertation, 1982, 18 p. (KLD, 5/83, 7098)

315. Chromiak, H. (NS). Microprobe study on glass lightguide structures. Elektronika [Poland], no. 10-12, 1982, 15-17,1-2. (RZhR, 5/83, 5Ye355)

316. Ciurapinski, W., and M. Szustakowski (NS). Propagation of waveguide modes in an anisotropic diffuse $LiNbO_3$ waveguide. BWAT, no. 3, 1982, 3-11. (RZhR, 5/83, 5Ye258)

317. Davydenko, B.Ye. (4). Optical modulation in an optical fiber with periodic deformation. ZhTF, no. 5, 1983, 958-960.

318. Demchenkov, V.P., L.N. Deryugin, and A.V. Chekan (0). Transmission of two-dimensional and color images through a single fiber using a spectral scanning method. IVUZ Radioelek, no. 5, 1983, 89-90.

319. Dianov, Ye.M. (0). Fiber lightguides for the medium IR. IVUZ Radioelek, no. 5, 1983, 27-35.

320. Dianov, Ye.M., A.A. Kuznetsov, and V.A. Sychugov (0). Methods and devices for spectral compression of channels in fiberoptic communications lines. IVUZ Radioelek, no. 5, 1983, 35-42.

321. Dockalek, A. (NS). Measurement and test instruments for optical cables and optical transmission systems. Slaboproudy obzor, no. 2, 1983, 53-59. (RZhR, 6/83, 6Ye114)

322. Dokhikyan, R.G., Ye.M. Zolotov, S.S. Karasinskiy, V.F. Maksimov, V.T. Popkov, A.M. Prokhorov, I.N. Sisakyan, and Ye.A. Shcherbakov (0). Study on the characteristics of an integrated-optical analog-digital converter. IVUZ Radioelek, no. 5, 1983, 93-94.

323. Dorosz, J., and R. Romaniuk (NS). Investigation of diffusion processes in multilayer optical fibers. Sb 3, 126-127. (RZhR, 5/83, 5Ye252)

324. Fel'd, S.Ya. (15). Effect of the properties and design of a light-reflecting shell on the characteristics of glass-polymer high-aperture lightguides. *Institut radiotekhnicheskiy institut* AN SSSR. Dissertation, 1982, 19 p. (KLD, 5/83, 7083)

325. Finak, J., H. Jerominek, Z. Opilski, and K. Wojtala (NS). Planar diffusion glass waveguides obtained by immersion in molten KNO_3. Opt app, no. 1, 1982, 11-17. (RZhF, 6/83, 6D956)

326. Goncharenko, A.M. (0). Status and prospects for integrated optics. IVUZ Radioelek, no. 5, 1983, 4-9.

327. Gordon, G.I., and I.I. Teumin (0). Frequency modulation characteristics of low-mode lightguides. IVUZ Radioelek, no. 5, 1983, 78-79.

328. Grigor'yants, V.V., and Yu.K. Chamorovskiy (0). Backscattering study on optical fiber characteristics. Sb 3, 170. (RZhR, 5/83, 5Ye205)

329. Grigor'yants, V.V., V.A. Detinich, A.A. Izyneyev, V.B. Kravchenko, V.P. Minkovich, and Yu.K. Chamorovskiy (0). Fiber lightguides based on multicomponent glass with polymer coatings. FiKhS, no. 3, 1983, 371-373.

330. Grodnev, I.I., and V.M. Lavrov (0). Development of fiberoptic information transmission systems. Elektrichestvo, no. 1, 1983, 4-11. (RZhR, 5/83, 5Ye325)

331. Gusev, Yu.M., S.A. Mironov, S.P. Orobinskiy, O.S. Lavrenova, O.V. Vinogradova, A.A. Kuz'min, A.I. Voytenkov, and V.P. Red'ko (0). Integrated optical coupler. IVUZ Radioelek, no. 5, 1983, 74-75.

332. Holoubek, J. (NS). Methods for measuring the refractive index profile for optical fibers. JMO, no. 2, 1983, 47-50. (RZhF, 6/83, 6D964)

333. Ignat'yev, I.A., V.G. Plekhanov, and A.F. Popkov (118). Propagation of e-m radiation in a planar gyrotropic waveguide. Sb 17, pp not given. (RZhF, 6/83, 6Zh3)

334. Kalapusha, A.L., and N.Ya. Kotsarenko (0). Acoustoelectronic parametric amplification of IR and visible e-m waves in planar lightguides. IVUZ Radioelek, no. 5, 1983, 71-72.

335. Kersten, R.Th., H.F. Schlaak, and C.H. Von Helmolt (NS). New developments in multi- and monomode integrated optics. Sb 16, 19-65. (RZhF, 6/83, 6D949)

336. Kersten, R.Th. (NS). Technological problems of integrated optical circuits. Sb 16, 66-125. (RZhR, 5/83, 5Ye389)

337. Khotyaintsev, S.N. (0). Use of optical waveguides in sensors of physical effects. IVUZ Radioelek, no. 5, 1983, 42-53.

338. Klimov, I.I., V.N. Morozov, and V.R. Shidlovskiy (1). Effect of fiber misalignment on nonlinear signal distortion in optical communication lines. KE, no. 5, 1983, 1024-1026.

339. Kludzin, V.V., and L.N. Preslenev (0). Noise in acoustooptic devices with optical heterodyning. Sb 10, 93-97.

340. Knappe, B., R. Kosicik, K. Moerl, H.R. Mueller, R. Perthel, and U. Roepke (NS). Methods for the determination of index profile distribution in optical fibers and preforms. Sb 16, 353-365. (RZhR, 5/83, 5Ye369)

341. Kocharyan, R.A., S.G. Zakutov, and R.S. Mnatsakanyan (0). Coupling for an optical lightguide. Otkr izobr, no. 24, 1983, 1026103.

342. Kolesnikov, P.M., and I.P. Rudenok (0). Wave theory of anisotropic graded-index lightguides. Sb 11, 3-14. (RZhF, 5/83, 5D278)

343. Konov, A.S., A.Yu. Laptev, V.M. Vorotyntsev, V.I. Chichetkin, and M.M. Bubnov (0). Effect of submicron particles in the reflective coating on losses in quartz-polymer fiber lightguides. Sb 18, 48-50. (RZhF, 6/83, 6D302)

344. Konov, A.S., A.Yu. Laptev, Ye.N. Kashigin, A.S. Yushin, and N.N. Vechkanov (0). Basic physical mechanical characteristics of fiber lightguides, and methods for improving them. Sb 18, 51-54. (RZhF, 6/83, 6D311)

345. Korneychuk, V.I. (0). Increasing the sensitivity of detectors for fiberoptic communications lines by parametric preamplification. IVUZ Radioelek, no. 5, 1983, 83-85.

346. Korshunov, I.P., and R.F. Matveyev (0). Determining the profile of amplitude-frequency characteristics of variable-length lightguides. IVUZ Radioelek, no. 5, 1983, 64-67.

347. Korshunov, I.P., and R.F. Matveyev (0). A method for determining the amplitude-frequency characteristics of regular multimode lightguides. RiE, no. 6, 1983, 1219-1222.

348. Kosinov, G.A., I.G. Lagutin, Yu.T. Larin, T.A. Martynova, A.N. Mart'yanov, V.D. Nazarov, K.D. Popovich, A.A. Teshchun, Ye.G. Fedorov, and G.A. Cherenkov (628). Study on radiation stability of optical cables under irradiation by 8 MeV electrons. KE, no. 5, 1983, 1012-1014.

349. Kovats, K. (NS). Design and technology of optical cable production. Slaboproudy obzor, no. 11, 1982, 517-524. (RZhR, 5/83, 5Ye401)

350. Kulakov, S.V., B.P. Razzhivin, and D.V. Tigin (0). High-resolution acoustooptic spectrum analyzer. Sb 10, 76-81.

351. Lapides, A.A. (15). Laser Fourier correction of images obtained on a mobile carrier. Institut radiotekhniki i elektroniki AN SSSR. Dissertation, 1982, 22 p. (KLD, 5/83, 7023)

352. Loginov, V.N., and A.I. Gusarov (118). Analytical calculation of the accuracy of evaluation for a poorly observable dynamic system. Sb 17, pp not given. (RZhF, 6/83, 6Zh3)

353. Lugomer, S., M. Stipancic, and A. Sertic (NS). Optical communications: transmission along optical fibers. Elektrotehnika [Yugoslavia], no. 6, 1982, 435-444. (RZhR, 6/83, 6Yel16)

354. Martynova, T.A., A.N. Mart'yanov, V.I. Oseledets, and G.A. Cherenkov (0). Study on the transmission of incoherent signal pulses through an optical cable. IVUZ Radioelek, no. 5, 1983, 82-83.

355. Mazanets, M., V. Sokhor, and P. Chefelin (0). Measuring the profile of the index of refraction and spectral dependence of the coefficient of attenuation in optical fibers. Sb 16, 366-384. (RZhF, 6/83, 6D306)

356. Mel'nikov, V.A. (0). Correction of phase inhomogeneities in a multichannel acoustic light modulator. Sb 10, 110-115.

357. Miler, M. (0). Study on holographic methods for forming elements in integrated optics. Sb 16, 126-173. (RZhF, 5/83, 5D856)

358. Mirakyan, M.M. (1). Study on the optical characteristics of single-mode fiber lightguides. Fizicheskiy institut AN SSSR. Dissertation, 1982, 19 p. (KLD, 5/83, 7038)

359. Molotok, V.V., and B.P. Razzhivin (0). Frequency distortions in an acoustooptic spectrum analyzer. Sb 10, 97-105.

360. Muravskiy, L.I., G.I. Gas'kevich, B.V. Gordechnyy, and A.G. Kuts' (81). Determination of various characteristics of photodetecting elements in coherent optical information processing systems. Sb 15, 99-102. (RZhF, 5/83, 5Zh104)

361. Ostroumenko, A.P. (16). Study on surface light waves in three-dimensional optical microwaveguides consisting of active dielectrics. Moskovskiy inzhenerno-fizicheskiy institut. Dissertation, 1982, 14 p. (KLD, 6/83, 6/83, 8838)

362. Ovilko, O.G., B.A. Moskalev, and O.I. Ioshin (231). Device for recording moving images on motion picture film. Otkr izobr, no. 24, 1983, 1026110.

363. Pokrovskiy, Yu.A., and Yu.S. Khukhulu (208). Calculating the lag in thermooptic microwaveguide devices. Deposit at VINITI, no. 707-83, 3 Feb 1983, 30 p. (RZhF, 6/83, 6D925)

364. Popesku, A.A., and P.G. Cherbar' (44). Multilayer optical waveguides consisting of As-S-Se system glassy semiconductors. Sb 2, 268.

365. Pugovkin, A.V., L.Ya. Serebrennikov, V.M. Shandarov, and S.M. Shandarov (0). Wideband integrated optical acoustooptic devices. Sb 10, 41-46.

366. Romaniuk, R. (NS). Advances in lightguide technology as illustrated by British technology. Elektronika [Poland], no. 10-12, 1982, 8-14,1-2. (RZhR, 5/83, 5Ye390)

367. Russu, Ye.V., V.G. Smirnov, T.A. Zenkovich, and V.I. Pavlenko (44). Study on the conditions of liquid phase epitaxy of InP-$In_{0.53}Ga_{0.47}As$ heterostructures. Sb 2, 158.

368. Savel, J. (NS). Design of components for optical cable communications. Slaboproudy obzor, no. 1, 1983, 1-6. (RZhR, 6/83, 6Ye125)

369. Semenov, N.A. (0). Properties of metallized lightguides for optical cables. IVUZ Radioelek, no. 5, 1983, 85-86.

370. Semenov, N.A. (0). Thermal noise in a lightguide. RiE, no. 6, 1983, 1222-1223.

371. Sidorenko, A.V. (87). Potential accuracy for optical transmission of c-w radio signals. Deposit at VINITI, no. 779-83, 14 Feb 1983, 20 p. (RZhR, 6/83, 6Ye112)

372. Shevchenko, V.V. (0). Shift formulas in dielectric waveguide theory. IVUZ Radioelek, no. 5, 1983, 9-18.

373. Simankova, L. (NS). Multiplex transmission at optical frequencies. Sdelovaci technika, no. 1, 1983, 3-5. (RZhR, 6/83, 6Ye124)

374. Sisakyan, I.N., and A.B. Shvartsburg (1). Dynamics of short intense pulses in a lightguide. KE, no. 5, 1983, 1045-1047.

375. Sisakyan, I.N., and A.B. Shvartsburg (1). Formation of amplitude-phase envelopes of intense short pulses in lightguides. KE, no. 5, 1983, 1059-1061.

376. Smolinski, A. (NS). Highlights of optical fiber communications. Sb 16, 321-341. (RZhR, 6/83, 6Ye134)

377. Solopov, V.M. (0). Method for evaluating intrinsic waves in multilayer lightguides with variable radii. IVUZ Radioelek, no. 5, 1983, 86-89.

378. Spikhal'skiy, A.A., V.A. Sychugov, and A.V. Tishchenko (1). Simple method for calculating the coefficient of optical attenuation in a corrugated waveguide. KE, no. 5, 1983, 944-949.

379. Svirid, V.A., N.F. Bogomolov, and L.K. Yarovoy (0). Laser welding of lightguides. IVUZ Radioelek, no. 5, 1983, 75-76.

380. Sychugov, V.A. (0). Microoptic and integrated optic demultiplexers in fiberoptic communications systems. Sb 16, 174-215. (RZhF, 6/83, 6D914)

381. Terichev, V.F. (0). Integrated optical elements for the medium IR. IVUZ Radioelek, no. 5, 1983, 53-56.

382. Vasilenko, P.G., I.M. Dubrovskaya, M.V. Lazarev, V.V. Lemanov, V.N. Ryzhevnin, and B.V. Sukharev (4). Optical switching with an electro-optic mirror in intersecting channel waveguides. ZhTF P, no. 12, 1983, 726-730.

383. Vasil'yev, V.Ye. (0). Providing reliability for optical cables. Elektrotekhnicheskaya promyshlennost'. Kabel'naya tekhnika, no. 2, 1983, 9-14. (RZhR, 6/83, 6Ye85)

384. Vasil'yev, Yu.G., L.I. Smirnov, and V.I. Fomichev (0). Study on the space-time response of a two-coordinate acoustooptic system to a complex radio signal. Sb 10, 106-109.

385. Voges, E. (0). Fabrication of optical strip waveguides by diffusion and ion implantation. Sb 16, 246-265. (RZhF, 6/83, 6D954)

386. Voytenko, I.G., A.N. Kozadoyev, V.P. Red'ko, O.I. Gorbunov, S.A. Mironov, and S.P. Orobinskiy (0). Study on Y-couplings for fiberoptic communications lines for butt joining into a multimode fiber. IVUZ Radioelek, no. 5, 1983, 80-81.

387. Vzyatyshev, V.F., and V.I. Kalinichev (0). Analysis of open resonant systems for the microwave and optical regions. IVUZ Radioelek, no. 5, 1983, 56-59.

C. BEAM PROPAGATION

1. In the Atmosphere

388. Abramov, B.A., R.R. Agishev, G.I. Il'in, and Yu.Ye. Pol'skiy (216). Device with wide dynamic range for measuring the amplitude of short optical signals. PTE, no. 3, 1983, 171-174.

389. Agishev, R.R., G.I. Il'in, Yu.Ye. Pol'skiy, and V.L. Filippov (0). Analysis of the precision of a device for measuring the atmospheric scattering index. ZhPS, v. 38, no. 5, 1983, 830-837.

390. Akhtyrchenko, Yu.V., L.A. Vasil'yev, Yu.P. Vysotskiy, and V.N. Soshnikov (0). Gasdynamic evaluation of the critical parameters in plasma formation by laser breakdown of aerosols in air. KE, no. 5, 1983, 989-995.

391. Antipov, A.B., V.Ye. Zuyev, V.A. Kapitanov, V.P. Lopasov, S.F. Luk'yanenko, L.N. Sinitsa, and V.A. Sapozhnikova (0). Laser methods for monitoring atmospheric and air-polluting gases. Sb 19, 65-75. (RZhF, 6/83, 6D1281)

392. Arshinov, Yu.F., Yu.S. Balin, S.M. Bobrovnikov, and I.A. Razenkov (0). Results of synchronous probing of the atmosphere by aerosol and Raman lidars. Sb 20, 11-15. (RZhR, 5/83, 5Ye573)

393. Arshinov, Yu.F., and S.M. Bobrovnikov (0). Remote measurements of the temperature profile of the atmosphere by a rotational Raman lidar. Sb 21, 3-6. (RZhR, 5/83, 5Ye585)

394. Arshinov, Yu.F., and S.M. Bobrovnikov (0). Remote determination of atmospheric transparency by a Raman lidar. Sb 21, 7-9. (RZhR, 5/83, 5Ye547)

395. Ashkinadze, D.A., and V.I. Belobrovik (0). Estimating the magnitude of inhomogeneities in the optical characteristics of the atmosphere in cities. Sb 20, 45-48. (RZhR, 5/83, 5Ye561)

396. Avramova, R.P., M.A. Mikhalev, I.N. Kolev, and Yu.M. Vorevodin (0). Evaluating the power of receiver noise in a lidar response. Bolgarskiy fizicheskiy zhurnal, no. 5, 1982, 531-537. (RZhR, 5/83, 5Ye543)

397. Bagrintseva, S.M., V.P. Galileyskiy, and G.G. Matviyenko (0). Allowing for the variability in the thickness of the atmosphere during lidar calibration. Sb 20, 116-118. (RZhR, 5/83, 5Ye553)

398. Bakut, P.A., V.A. Loginov, and G.I. Maystrenko (0). Optimization of optical signal processing using incoherent detection. RiE, no. 5, 1983, 931-942.

399. Balin, Yu.S., S.I. Kavkyanov, G.M. Krekov, and I.A. Razenkov (0). Selection of an algorithm for processing lidar signals during probing of optically dense atmospheric formations. Sb 20, 173-176. (RZhR, 5/83, 5Ye558)

400. Banakh, V.A., V.M. Buldakov, and V.L. Mironov (0). Fluctuations in the intensity of a partially coherent light beam in a turbulent atmosphere. OiS, v. 54, no. 6, 1983, 1054-1059.

401. Belobrovik, V.I., M.I. Demchuk, and I.M. Kozlov (0). Determining the position and power of a source of discharges by data from lidar probing of the atmosphere. Sb 20, 81-83. (RZhR, 5/83, 5Ye578)

402. Belov, M.L., V.M. Orlov, A.F. Ovcharenko, and G.G. Matviyenko (0). Remote probing of natural formations. Low angles of probing. Sb 20, 63-67. (RZhR, 5/83, 5Ye568)

403. Belov, M.L., V.M. Orlov, A.F. Ovcharenko, I.V. Samokhvalov, and V.S. Shamanayev (0). Remote probing of natural formations. Large angles of probing. Sb 20, 68-72. (RZhR, 5/83, 5Ye567)

404. Belov, M.L., and V.M. Orlov (0). Remote probing of the earth's atmosphere. Sb 20, 73-76. (RZhR, 5/83, 5Ye570)

405. Blakhovskaya, T.V., and A.A. Mitsel' (0). Engineering methods for evaluating the characteristics of molecular absorption in the 10.6 μm region. Sb 9, 67-80. (RZhF, 6/83, 6D1057)

406. Bobrovnikov, S.M. (0). Remote probing of the optical characteristics of atmospheric aerosols by a Raman lidar. Sb 20, 16-18. (RZhR, 5/83, 5Ye574)

407. Bochkov, D.S., V.A. Donchenko, and N.N. Latyshev (0). Correlation between the intensity distribution in a transverse cross-section of an optical beam and scattered radiation. Sb 20, 141-142. (RZhR, 5/83, 5Ye551)

408. Borkin, S.T., L.V. Zhitkov, N.P. Kopylov, M.A. Motin, and V.G. Semin (0). Lidar studies of the characteristics of smoke aerosols precipitating from fires. Sb 20, 36-39. (RZhR, 5/83, 5Ye560)

409. Boronoyev, V.V., and V.D. Dashinimayev, V.L. Mironov, V.N. Poplaukhin, and E.A. Trubacheyev (0). Radar measurements of the structural characteristic of a turbulent atmosphere. Sb 20, 276-278. (RZhR, 5/83, 5Ye555)

410. Bukatyy, V.I., and A.M. Shayduk (0). Speed in clearing a polydisperse combustible aerosol. Sb 9, 1982, 40-48. (RZhF, 6/83, 6D1065)

411. Bukin, O.A., U.Kh. Kopvillem, S.Yu. Stolyarchuk, and V.A. Tyapkin (0). Study on the Raman spectra of atmospheric gases. ZhPS, v. 38, no. 5, 1983, 776-779.

412. Buldakov, M.A., Yu.D. Kopytin, S.V. Lazarev, and I.I. Matrosov (0). Study on the possibilities of using active Raman and hyper-Raman spectroscopy for diagnostics of the parameters of the atmosphere and of intense laser radiation. Sb 21, 24-28. (RZhR, 5/83, 5Ye587)

413. Dolgiy, S.I., I.I. Ippolitov, G.S. Khmel'nitskiy, and S.F. Shubin (0). Laser gas analysis of hydrocarbon oil pollutants in the atmosphere. Sb 21, 29-31. (RZhR, 5/83, 5Ye588)

414. Ferdinandov, E.S., and Ts.A. Mitsev (NS). Effect of transparency fluctuations on the accuracy of lidar correlation measurements of a statistically inhomogeneous atmosphere. Bolgarskiy fizicheskiy zhurnal, no. 5, 1982, 537-548. (RZhF, 6/83, 6D1049)

415. Ferdinandov, E.S., Ts.A. Mitsev, and S.L. Nitsolov (NS). Approximate determination of the statistical error in lidar measurements of wind velocity, allowing for the evolution of aerosol nonuniformities. Bolgarskiy fizicheskiy zhurnal, no. 6, 1982, 672-686. (RZhR, 6/83, 6Ye245)

416. Gendrin, A.G., and V.V. Fomin (O). Methods for calculating the background radiation in an "atmosphere--underlying surface layer" system during laser probing of the atmosphere. Sb 20, 144-146. (RZhR, 5/83, 5Ye550

417. German, A.I., A.P. Tikhonov, and A.Ye. Tyabotov (O). Results of lidar studies on cloud formations during active measures. Sb 20, 152-155. (RZhR, 5/83, 5Ye562)

418. German, A.I., A.P. Tikhonov, and A.Ye. Tyabotov (O). Change in the optical characteristics of supercooled fog during its scattering as a result of active measures. Sb 20, 156-159. (RZhR, 5/83, 5Ye546)

419. Glazov, G.N. (O). Potential accuracy of lidar measurement of modulation parameters. Sb 20, 88-91. (RZhR, 5/83, 5Ye447)

420. Glazov, Gr.N., Gen.N. Glazov, and G.M. Igonin (O). Optimal filtering of the Rayleigh parameters of the atmosphere in the detector of a single-frequency lidar. Sb 20, 100-103. (RZhR, 5/83, 5Ye563)

421. Godlevskiy, A.P., A.K. Ivanov, and Yu.D. Kopytin (O). Theoretical analysis of the potential possibilities of a method for remote gas analysis, using the incoherent and partially incoherent detection of scattered radiation by a laser. Sb 21, 14-17. (RZhR, 5/83, 5Ye586)

422. Grishin, A.I., and G.G. Matviyenko (O). Experimental study on the fluctuation characteristics of the lidar relation in the lower atmosphere. Sb 20, 262-264. (RZhR, 5/83, 5Ye559)

423. Gyngazov, S.A., S.I. Kavkyanov, and G.M. Krekov (O). Model calculations of lidar signal fluctuations. Sb 20, 268-269. (RZhR, 5/83, 5Ye549)

424. Ignatenko, V.M., and V.A. Kovalev (O). Results of lidar probing of the atmosphere over inclined paths. Sb 20, 34-35. (RZhR, 5/83, 5Ye579)

425. Ivanov, A.P., A.P. Chaykovskiy, and V.N. Shcherbakov (O). Using A.N. Tikhonov's regularization method to solve the lidar equation. Sb 20, 53-56. (RZhR, 5/83, 5Ye451)

426. Kabanov, M.V., and S.M. Sakerin (O). Use of passive probing methods for lidar calibration. Sb 20, 119-122. (RZhR, 5/83, 5Ye566)

427. Kabanov, M.V., and S.M. Sakerin (O). Methods for passive probing of the transparency of the atmosphere in the surface boundary layer. FAiO, no. 2, 1983, 147-155. (RZhF, 6/83, 6D1062)

428. Kazaryan, R.A., and A.V. Sinyavskiy (O). Probing of a homogeneously scattering atmosphere by arbitrarily shaped light pulses. IAN Arm, no. 6, 1982, 347-350. (RZhF, 6/83, 6D1050)

429. Kokurin, Yu.L., V.V. Kurbasov, V.F. Lobanov, and A.N. Sukhanovskiy (1). Second generation lidar system for measuring the distance to the moon. KE, no. 6, 1983, 1195-1202.

430. Kolosov, V.V. (132). Propagation of optical radiation in cleared channels formed by the explosion of aerosols in laser beams. Tomskiy GU. Dissertation, 1982, 15 p. (KLD, 6/83, 8807)

431. Kopytin, Yu.D., and G.A. Mal'tseva (0). Nonlinear distortions of a high-power laser pulse while probing an aerosol haze. Deposit at VINITI, no. 734-83, 9 Feb 1983, 12 p. (RZhF, 6/83, 6D1051)

432. Korshunov, V.A., and N.P. Romanov (0). Method of lidar relations in multiwave probing. Sb 20, 215-218. (RZhR, 5/83, 5Ye589)

433. Kostin, B.S., and I.E. Naats (0). Theory of remote determination of the microphysical characteristics of aerosols by multifrequency lidars. Sb 20, 185-191. (RZhR, 5/83, 5Ye557)

434. Kostin, B.S., and I.E. Naats (0). Method for estimating the grain sizes of particles by interpretation of data from multifrequency laser probing. Sb 20, 196-200. (RZhR, 5/83, 5Ye591)

435. Kostin, B.S., and I.E. Naats (0). Information content of three-frequency lidar measurements. Sb 20, 201-205. (RZhR, 5/83, 5Ye592)

436. Kovalev, A.F., F.P. Osipenko, N.P. Romanov, and V.S. Shuklin (0). Laser probing of aerosol layers under temperature inversion conditions. Sb 20, 192-195. (RZhR, 5/83, 5Ye554)

437. Kravchenko, I.I. (0). Selection of the optimum angle for recording light scattered by large transparent particles. Metrologiya, no. 5, 1983, 58-62.

438. Krekov, G.M., and M.M. Krekova (0). Formation of a polarization structure of a signal during probing of clouds. Sb 20, 219-221. (RZhR, 5/83, 5Ye581)

439. Kugeyko, M.M., N.M. Sergeyev, and D.A. Ashkinadze (0). Schemes for probing the atmosphere by means of the motion of detection-measurement systems. Sb 20, 77-80. (RZhR, 5/83, 5Ye576)

440. Kugeyko, M.M., N.M. Sergeyev, and D.A. Ashkinadze (0). Accuracy characteristics in probing of the atmosphere by mobile lidars. Sb 20, 84-87. (RZhR, 5/83, 5Ye569)

441. Lukin, V.P., and V.V. Pokasov (78). "Quasi-mode" correction for images transmitted through a randomly-inhomogeneous medium. KE, no. 5, 1983, 995-1001.

442. Makiyenko, E.V. (0). Interpretation of data from multifrequency laser probing of stratospheric aerosols. Sb 20, 206-209. (RZhR, 5/83, 5Ye590)

443. Marichev, V.N., A.Ya. Kuzin, and A.V. Yel'nikov (0). Lidar probing of the atmosphere by c-w radiation. Sb 20, 104-107. (RZhR, 5/83, 5Ye564)

444. Mitev, V.M., V.B. Simeonov, and I.V. Grigorov (NS). Model experiment in measuring the temperature and concentration of water vapor in air by spontaneous Raman scattering. Bolgarskiy fizicheskiy zhurnal, no. 5, 1982, 549-558. (RZhF, 6/83, 6D564)

445. Pelevin, V.N. (0). Remote optical methods for measuring the sea state. Sb 22, 101-112.

446. Pkhalagov, Yu.A., and V.N. Uzhegov (0). Correlation of the coefficients of aerosol attenuation in the visible and infrared. Sb 20, 138-140. (RZhR, 5/83, 5Ye552)

447. Pogodayev, V.A., and A.Ye. Rozhdestvenskiy (78). Formation of a zone of increased transparency in a weakly absorbing aqueous aerosol. ZhTF P, no. 11, 1983, 686-689.

448. Ponomarev, Yu.N. (0). Information on the spectral and relaxation characteristics of vibrational-rotational transitions of H_2O for solving problems on the propagation of pulsed ruby laser radiation in the atmosphere. Deposit at VINITI, no. 737-83, 9 Feb 1983, 20 p. (RZhF, 6/83, 6D1235)

449. Ponomareva, O.V., I.V. Samokhvalov, V.L. Sergeyev, V.S. Shamanayev, and N.Ye. Yakovlev (0). Recognition of cloud types by statistical analysis of the polarization characteristics of lidar signals. Sb 20, 225-228. (RZhR, 5/83, 5Ye583)

450. Portasov, V.S. (0). Lidar study on multiple aerosol scattering in the atmosphere. Sb 20, 222-224. (RZhR, 5/83, 5Ye582)

451. Prishivalko, A.P. (0). Dynamics of heating large water drops by ruby laser radiation. Deposit at VINITI, no. 1049-83. (ZhPS, v. 38, no. 6, 1983, 1020)

452. Sakerin, S.M. (7). Effect of atmospheric conditions and parameters of an E-O device on measuring transparency by a base method. OMP, no. 5, 1983, 6-9.

453. Shifrin, K.S. (0). Optical methods in space oceanography. Sb 22, 143-171.

454. Sidorenko, Yu.K. (110). Calculating the radiation energy at the input of a lidar detector during reflection of light from a wavy water surface. Tr 2, 13-16.

455. Sokolov, V.A., and A.V. Migulin (0). Possibility of lidar measurements of humidity by means of an optical parametric oscillator. Sb 21, 10-13. (RZhR, 5/83, 5Ye548)

456. Telegin, G.V. (0). Continuous absorption in the spectrum of water vapor. Sb 9, 49-66. (RZhF, 6/83, 6D1056)

457. Titsel', A.A. (0). Statistical characteristics of the absorption of radiation by atmospheric gases in the 10.6 μm region. Sb 9, 81-89. (RZhF, 6/83, 6D1054)

458. Tokarev, O.D., T.P. Toropova, and M.A. Derbisalin (0). Scattering of laser light in the region of ranging angles. Sb 20, 131-133. (RZhR, 5/83, 5Ye457)

459. Tvorogov, S.D. (O). Fluctuations in the parameters of an e-m wave in a turbulent light-absorbing atmosphere. Sb 19, 54-64. (RZhF, 6/83, 6Zh119)

460. Vorevodin, Yu.M., and G.G. Matviyenko (O). Determination of wind parameters by lidar circular scanning. Sb 20, 247-250. (RZhR, 5/83, 5Ye575)

461. Vorobey, N.P., F.P. Osipenko, I.S. Khutko, and A.P. Chaykovskiy (O). Study on the optical characteristics of tropospheric aerosols over deserts. Sb 20, 23-26. (RZhR, 5/83, 5Ye572)

462. Yurga, N.I., G.G. Matviyenko, and Yu.M. Vorevodin (O). Measurement of wind velocity by a scanning correlation lidar. Sb 20, 234-237. (RZhR, 5/83, 5Ye577)

463. Zakharov, V.M., and G.M. Kruchenitskiy (O). Bistatic lidar study on atmospheric turbulence. Sb 20, 270-271. (RZhR, 5/83, 5Ye556)

464. Zemlyanskiy, V.M., A.I. Trush, and A.P. Chudesov (O). Study on coherent optical Doppler sensors of aerosol sizes. Sb 20, 283-284. (RZhR, 5/83, 5Ye571)

465. Zuyev, V.Ye., G.M. Krekov, M.M. Krekova, I.V. Samokhvalov, and V.S. Shamanayev (O). Laser probing of clouds of a complex phase composition. Sb 20, 147-151. (RZhR, 5/83, 5Ye565)

2. In Liquids

466. Bravo-Zhivotovskiy, D.M., L.S. Dolin, A.G. Luchinin, and I.M. Levin (O). Theory of optical image transfer in water. Sb 23, 96-113.

467. Burenkov, V.I., and A.P. Vasil'kov (0). Terms and definitions in the theory of optical radiation transfer in the ocean. Sb 23, 6-18.

468. Burenkov, V.I., B.F. Kel'balikhanov, O.V. Kopelevich, V.L. Vlasov, and G.S. Karabashev (0). Methods for measuring the optical properties of seawater. Sb 23, 114-150.

469. Burenkov, V.I., and V.I. Voytov (0). Study on hydrophysical processes. Sb 22, 112-125.

470. Galich, N.Ye. (29). Initiation, suppression and amplification of turbulence during the propagation of optical and IR radiation in liquids and gases. ZhTF, no. 5, 1983, 932-935.

471. Garstka, J. (NS). Measurement of water depth by laser sounders. Pomiary, automatyka, kontrola, no. 8-9, 1982, 251-253,286-287. (RZhR, 5/83, 5Ye602)

472. Gol'din, Yu.A., B.F. Kel'balikhanov, and V.N. Pelevin (0). Measuring the parameters of light fields in the ocean. Sb 23, 236-248.

473. Gol'din, Yu.A., L.S. Dolin, and V.N. Pelevin (0). Light field from artificial light sources in the ocean. Sb 23, 307-342.

474. Gol'din, Yu.A. (0). Lidars for oceanographic research. Sb 22, 200-215.

475. Kopelevich, O.V., and G.S. Karabashev (0). Factors determining the optical properties of seawater. Sb 23, 150-166.

476. Kopelevich, O.V. (0). Experimental data on the optical properties of seawater. Sb 23, 166-208.

477. Kopelevich, O.V. (0). Small-parameter model of the optical properties of seawater. Sb 23, 208-234.

478. Kopelevich, O.V., and P.S. Karabashev (0). Study on plankton and organic matter. Sb 22, 136-143.

479. Kopelevich, O.V., and E.M. Mezhericher (0). Calculating the spectral characteristics of light scattering by seawater. FAiO, no. 2, 1983, 195-202. (RZhF, 6/83, 6D1068)

480. Pelevin, V.N., and A.I. Sud'bin (0). Solar radiation in the ocean. Sb 23, 249-307.

481. Shifrin, K.S. (0). Theory of absorption and scattering of light in seawater. Sb 23, 18-54.

482. Shifrin, K.S. (0). Determining the quantitative and qualitative composition of ocean suspensions by their light scattering characteristics. Sb 22, 126-136.

483. Vasil'kov, A.P., L.S. Dolin, and A.S. Monin (0). Radiation transfer equation and basic methods for solving it. Sb 23, 55-95.

484. Voytov, V.I., and V.I. Burenkov (0). Fundamentals of optical oceanography. Sb 22, 5-16.

485. Voytov, V.I., A.I. Sud'bin, Yu.Ye. Ochakovskiy, V.N. Pelevin, and V.I. Burenkov (0). Optical characteristics of surface water. Sb 22, 16-82.

486. Voytov, V.I., and V.A. Matyushenko (0). Optical characteristics of intermediate, deep and bottom waters of the world ocean. Sb 22, 83-101.

3. Adaptive Optics

487. Alekseyev, V.N., D.I. Dmitriyev, N.N. Rozanov, V.A. Smirnov, A.D. Starikov, and V.N. Chernov (0). Amplification of phase-conjugated plane waves during small scale self-focusing of light in glass. KE, no. 5, 1983, 1010-1012.

488. Aleynikov, V.S., Yu.F. Bondarenko, O.L. Kulikov, N.F. Pilipetskiy, and G.S. Starikova (431). Wavefront reversal of CO_2 laser radiation by a surface. KE, no. 6, 1983, 1278-1280.

489. Basov, N.G., V.I. Kovalev, and F.S. Fayzullov (1). Dynamic range for reflection during four-wave interaction in resonant media at 10.6 μm. KE, no. 6, 1983, 1276-1278.

490. Bunkin, F.V., and D.V. Vlasov (0). Wavefront reversal in acoustics. AN SSSR. Vestnik, no. 11, 1982, 52-59. (RZhF, 5/83, 5Zh704)

491. Chesnokov, S.S. (2). Compensating for thermal blooming by a three-element adaptive corrector. KE, no. 6, 1983, 1160-1165.

492. Kukhtarev, N.V., and G.Ye. Dovgalenko (5). Diffractional gyration of light waves in optically active crystals. Institut fiziki AN UkrSSR. Preprint, no. 10, 1983, 21 p.

493. Ryakhin, A.D., and K.N. Sviridov (118). Determining the adaptively compensatable inclination of a wavefront by the coordinates of the center of gravity of the object image. Sb 17, pp not given. (RZhF, 6/83, 6Zh3)

494. Vaytkus, Yu.Yu., and K.Yu. Yarashyunas (49). Nonlinear optics of semiconductors and their application in adaptive optics. Sb 24, 192-198.

495. Vorontsov, M.A., V.P. Sivokon', and V.I. Shmal'gauzen (2). Phase conjugation method in adaptive systems for shaping optical beams. IVUZ Fiz, no. 3, 1983, 26-37.

4. Theory

496. Bokut', B.V., G.S. Mityurich, and V.V. Shepelevich (0). Reflection of light from absorbing gyrotropic uniaxial crystals. DAN B, no. 1, 1983, 23-26. (RZhF, 5/83, 5D257)

497. Chernov, S.P., and A.V. Shepelev (2). Reflection of light from an interface of media with thermal nonlinearity. VMU, no. 1, 1983, 41-47. (RZhF, 6/83, 6D1233)

498. Gavrilyuk, A.P., and I.V. Krasnov (0). Optimum 0-Π pulses. OiS, v. 54, no. 6, 1983, 937-939.

499. Kaiser, H., and H.C. Kaiser (NS). Determining the profile of the coefficient of refraction from the coefficient of reflection. Sb 7, 75-99. (RZhF, 6/83, 6D279)

500. Krivoshlykov, S.G., Ye.V. Kurmyshev, and I.N. Sisakyan (1). Correlated coherent states in problems of wave propagation in inhomogeneous media with square-law transverse distribution of the refractive index. Fizicheskiy institut AN SSSR. Preprint, no. 166, 1983, 28 p.

501. Ledenev, V.I. (2). Monte-Carlo study on the propagation of a light beam in a randomly inhomogeneous nonlinear medium. Moskovskiy GU. Dissertation, 1982, 17 p. (KLD, 5/83, 7025)

502. Loetzsch, S. (NS). Representation of dispersion curves of nonabsorbing media in terms of two constants. Sb 7, 75-99. (RZhF, 6/83, 6D281)

503. Ognev, L.I. (2). Study on the propagation of light beams under conditions of resonant interaction with matter. Moskovskiy GU. Dissertation, 1982, 16 p. (KLD, 5/83, 7045)

504. Pon'kin, V.A., and P.M. Yukhno (0). Energy model for the formation process of images in an optical system. RiE, no. 6, 1983, 1051-1057.

D. COMPUTER TECHNOLOGY

505. Bachevskiy, R.S., G.I. Gas'kevich, B.V. Gorodechnyy, L.I. Muravskiy, and A.G. Kuts' (81). Photolayers as coherent optical signal recorders. Sb 15, 12-13. (DNR, 6/83, 39)

506. Bachevskiy, R.S., G.I. Gas'kevich, and L.I. Muravskiy (81). Normalization of the input signal in coherent optical information processing systems. Sb 15, 14-15. (DNR, 6/83, 40)

507. Bukharin, N.A. (0). Effect of additive noise on the operation of a time-integrated acoustooptic correlator. Sb 10, 67-71.

508. Buryak, F.P., and V.G. Vorob'yev (151). Information storage effect in chalcogenide glassy semiconductor photothermoplastic carriers. Sb 2, 241.

509. Grinev, A.Yu., V.F. Trukhin, V.S. Temchenko, and O.F. Yankovskiy (116). Coherent optical signal processor using a spatial optical modulator with multichannel optical addressing. KE, no. 5, 1983, 1036-1038.

510. Malinovskiy, V.K. (0). Physical properties of media for optical memory and holography. Sb 16, 387-401. (RZhR, 5/83, 5Ye621)

511. Muravskiy, L.I., G.I. Gas'kevich, B.V. Gorodechnyy, and A.G. Kuts' (81). Determination of various characteristics of photodetecting elements in coherent optical information processing systems. Sb 15, 99-102. (DNR, 6/83, 62)

512. Ochin, Ye.F. (0). Synthesis of spatial-frequency filters for a coherent optical processor. Sb 16, 402-412. (RZhF, 6/83, 6D922)

513. Pilawski, M., and K. Smolinska (NS). PLZT ceramic optoelectronic analog, logic and switch devices. Opt app, no. 1, 1982, 67-73. (RZhR, 6/83, 6Ye61)

514. Yegorov, Yu.V. (0). Acoustooptic method for image encoding and recognition. Sb 10, 46-51.

E. HOLOGRAPHY

515. Agrinskiy, P.V., B.P. Zakharchenya, Ye.V. Tsukerman, and F.A. Chudnovskiy (4). Holographic matched filtering using phase transformation interference optical reflectors. ZhTF P, no. 12, 1983, 716-719.

516. Artemenko, S.B., V.L. Ushakov, and A.N. Chernovol (460). Universal holographic camera. ZL, no. 6, 1983, 88-89.

517. Badalyan, V.G., and Ye.G. Bazulin (21). Digital reconstruction in acoustic holography. *Akusticheskiy zhurnal*, no. 3, 1983, 403-404.

518. Bazhenov, M.Yu., N.G. Kuvshinskiy, and N.G. Nakhodkin (51). Steady-state and transient photoconductivity in thin films of vinyl and propenyl carbazole copolymers. UFZh, no. 6, 1983, 907-912.

519. Chernyshev, Yu.A. (118). Study on the accuracy of hologram reconstruction of phase information. Sb 17, pp not given. (RZhF, 6/83, 6Zh3)

520. Denisyuk, Yu.N. (0). Problems and prospects of holography in three-dimensional media. Sb 25, 691-729. (RZhR, 6/83, 6Ye277)

521. Fiala, P. (0). Pulsed holography and its application. Sb 16, 413-430. (RZhF, 6/83, 6D995)

522. Gafner, A.Ye., T.S. Kuli-zade, Ye.A. Podpalyy, G.I. Rusov, V.T. Sukhomlin, and S.O. Shilyadov (486). Study on the characteristics of thermomagnetic recording on 3d-4f metal alloy films. ZhNiPFiK, no. 3, 1983, 204-208.

523. Kamshilin, A.A., and M.G. Miteva (0). Electrooptic photoconducting medium used for conversion of incoherent to coherent images. Author's certificate Bulgaria, no. 30906, 25 Sep 1981. (RZhR, 5/83, 5Ye615)

524. Kamshilin, A.A. (4). Nonlinear phenomena in holographic recording in photorefractive crystals of $LiNbO_3$ and $Bi_{12}SiO_{20}$. Fiziko-tekhnicheskiy institut AN SSSR. Dissertation, 1982, 20 p. (KLD, 5/83, 7003)

525. Keprt, J., D. Nehnevaj, K. Fuknova, P. Vejbor, and H. Houserkova (NS). Acoustic holography using continuous photography of a water surface. JMO, no. 1, 1983, 5-10. (RZhF, 6/83, 6Zh753)

526. Kiselev, N.G. (0). Effect of the substrate on the quality of a holographic optical element. OiS, v. 54, no. 5, 1983, 833-838.

527. Klimenko, I.S., V.P. Ryabukho, B.V. Feduleyev, and N.V. Lokhova (118). Holographic method for image readout using a spatial filter. ZhTF, no. 5, 1983, 888-891.

528. Kolezhuk, K.V., A.V. Savchuk, Ye.N. Sal'kova, M.S. Soskin, and G.A. Fedorus (6). Method for recording stationary holograms. Otkr izobr, no. 21, 1983, 915607.

529. Malakhova, I.A., L.M. Sokolova, T.T. Yeremina, T.A. Fokina, and N.V. Panova (0). Two-layer photothermoplastic film. Sb 26, 3-6. (RZhF, 5/83, 5D890)

530. Shepelevich, V.V. (0). Formation process for holographic gratings in a plane-parallel gyrotropic layer. OiS, v. 54, no. 6, 1983, 1064-1071.

531. Smirnov, V.V., V.G. Bespalov, Yu.P. Gudakovskiy, A.M. Dukhovnyy, T.Ya. Kal'nitskaya, and G.B. Semenov (0). Study on obtaining holograms of the intraocular cavity. OiS, v. 54, no. 6, 1983, 1072-1077.

532. Vishnyakov, G.N., N.G. Vlasov, and G.G. Levin (0). Producing longitudinal tomographic interferograms. OiS, v. 54, no. 5, 1983, 911-913.

F. LASER-INDUCED CHEMICAL REACTIONS

533. Akramova, D.Sh., and V.K. Medvedeva (85). The process of one-electron nonlinear ionization of a barium atom. IAN Uz, no. 3, 1983, 60-62.

534. Alimov, D.T., I.V. Yedvabnyy, B.S. Luk'yanchuk, and P.K. Khabibullayev (1). Bistability during laser heating of chemically active media. Fizicheskiy institut AN SSSR. Preprint, no. 169, 1983, 19 p.

535. Alimpiyev, S.S., B.O. Zikrin, B.G. Sartakov, and E.M. Khokhlov (1). IR multiphoton excitation of an SF_6 gas: absorption energy distribution and relaxation kinetics. Fizicheskiy institut AN SSSR. Preprint, no. 205, 1983, 38 p.

536. Apatin, V.M., V.M. Krivtsun, Yu.A. Kuritsyn, G.N. Makarov, I. Pak, I.I. Zasavitskiy, and A.P. Shotov (72). Diode spectroscopy of SF_6 molecules cooled by a pulsed jet during multiphoton excitation. ZhETF P, v. 37, no. 8, 1983, 365-368.

537. Asinovskiy, E.I., L.M. Vasilyak, and V.V. Markovets (74). Wave breakdown of gaseous impurities. Part 2. Wave breakdown in distributed systems. TVT, no. 3, 1983, 577-590.

538. Bagratashvili, V.N. (614). Multiphoton IR dissociation of molecules and laser radical chemical synthesis. Sb 24, 98-106.

539. Baklanov, A.V. (295). Study on the decay of polyatomic molecules under the action of pulsed CO_2 laser radiation. Institut khimicheskoy kinetiki i goreniya SOAN. Dissertation, 1982, 16 p. (KLD, 6/83, 8894)

540. Bondar', I.I., A.I. Gomonay, N.B. Delone, and V.V. Suran (1). Nonlinear ionization of a barium atom by radiation at a frequency of 18800-18900 cm^{-1}. Fizicheskiy institut AN SSSR. Preprint, no. 249, 1983, 26 p.

541. Darznek, S.A., M.M. Zverev, and S.P. Kopyt (626). Multistepped photoionization of iodine molecules in a dense gaseous medium. KE, no. 6, 1983, 1270-1273.

542. Delone, N.B., and V.P. Kraynov (1). Two-photon ionization of highly excited atoms. Fizicheskiy institut AN SSSR. Preprint, no. 15, 1983, 12 p. (RZhF, 6/83, 6D370)

543. Delone, N.B., M.Yu. Ivanov, and V.P. Kraynov (1). Multiphoton ionization of highly excited atom states. Fizicheskiy institut AN SSSR. Preprint, no. 42, 1983, 16 p. (RZhF, 6/83, 6D246)

544. Makarov, A.A. (72). Laser detection of rare radioactive isotopes. Method for selective enrichment of the original state. KE, no. 6, 1983, 1127-1137.

545. Nikitin, I.V., I.N. Luchnik, and A.N. Yermakov (51). Critical effects in hydrogen photobromination reactions under pulsed photolysis. KhVE, no. 3, 1983, 266-269.

546. Nikogosyan, D.N. (72). Picosecond study on singlet excited states of nucleic acid base molecules. Sb 24, 142-154.

547. Nikonorov, A.P., Ye.N. Moskvitina, Yu.Ya. Kuzyakov, and P.I. Stepanov (2). Radiative recombination of BCl molecules with chlorine atoms formed during the dissociation of boron trichloride under the effect of pulsed CO_2 laser radiation. ZhFKh, no. 6, 1983, 1510-1514.

548. Sazonov, V.N., and G.V. Shmerling (1). Effect of inert gases on laser-initiated chemical reactions. Part 2. Experiments. KE, no. 5, 1983, 1043-1045.

G. MEASUREMENT OF LASER PARAMETERS

549. Alimpiyev, S.S., L.S. Kremenchugskiy, E.M. Khokhlov, and A.Ya. Shul'ga (1,5). Digital pyroelectric calorimeter based on $BaTiO_3$ for measuring the energy of laser pulses. PTE, no. 3, 1983, 168-171.

550. Aponin, G.I. (23). Research and development of various methods for diagnostics of flows of laser mixtures. Institut atomnoy energii. Dissertation, 1982, 24 p. (KLD, 5/83, 6946)

551. Avtonomov, V.P., A.A. Kuznetsov, V.N. Ochkin, N.N. Sobolev, M.V. Spiridonov, and Yu.B. Udalov (1). Stabilized tuning of laser frequencies by a two-part interferometer. KE, no. 6, 1983, 1137-1145.

552. Borisenko, A.I., Ya.T. Zagorskiy, A.F. Kotyuk, and A.A. Kuznetsov (0). Means for measuring the energy of pulsed laser radiation. Review. Sb 27, 24-25. (RZhF, 6/83, 6D1175)

553. Both, W. (NS). Measurement of the thermal impedance of laser diodes. Zeitschrift für Elektrische Informations und Energietechnik, no. 6, 1982, 558-564. (RZhR, 6/83, 6Ye182)

554. Chertkov, A.A. (29). Programming of time parameters of pulsed solid-state laser radiation by means of electrooptic devices. Leningradskiy politekhnicheskiy institut. Dissertation, 1982, 15 p. (KLD, 6/83, 8869)

555. Gembitskiy, S.L., and M.P. Surodin (0). Measuring the length of radiation pulses from semiconductor injection diode lasers. IT, no. 6, 1983, 37-40.

556. Grimblatov, V.M. (240). Method for determining displacements in the directional pattern of a laser beam. Otkr izobr, no. 17, 1983, 625540.

557. Gusev, A.Yu. (159). Using automated systems to study frequency stability of lasers and narrow optical resonances. Institut teplofiziki SOAN. Dissertation, 1982, 19 p. (KLD, 6/83, 8792)

558. Karabak, Yu.V. (0). Processing of the results of measurements in systems for determining the spatial-energy characteristics of pulsed laser radiation. Sb 27, 79-86. (RZhF, 6/83, 6D1179)

559. Kasparov, I.N., O.P. Londarenko, and V.A. Ponomarev (0). The Shch68005 digital measuring instrument for sample measuring of optical radiation energy. Sb 27, 46-50. (RZhF, 6/83, 6D1176)

560. Kotyuk, A.F., A.M. Raytsin, N.A. Kolbanovskaya, and V.B. Korshikov (0). Reconstructing and transmitting the cross-sectional relative energy distribution in a laser beam. IT, no. 5, 1983, 34-37.

561. Larikov, A.V., A.A. Malyutin, and A.N. Filippov (1). Multichannel system for precise measurement of the energy of pulsed laser radiation. PTE, no. 3, 1983, 166-168.

562. Liberman, A.A. (0). Theoretical study on measurement of optical characteristics. Sb 27, 94-109. (RZhF, 6/83, 6D1180)

563. Londarenko, O.P., N.I. Tsybulenko, and V.A. Shumkin (0). The Shch68006 specialized digital measuring instrument for sample measuring of the average power of laser radiation. Sb 27, 50-57. (RZhF, 6/83, 6D1177)

564. Maksjan, K., M. Palys, and W. Trojanowski (NS). Instrument for measuring high power of molecular lasers: design, measuring principle, results of studies. BWAT, no. 12, 1982, 151-156. (RZhF, 5/83, 5D1126)

565. Sukhanov, I.I. (0). Determining the radius of spatial coherence in a multimode laser beam by speckle contrast. Avtometriya, no. 3, 1983, 58-62.

566. Tsybulenko, N.I. (0). Analysis of the metrological characteristics of a specialized digital instrument for measuring the average power of laser radiation. Sb 27, 57-66. (RZhF, 6/83, 6D1178)

567. Tychinskiy, V.P. (161). Correlation interferometry of laser radiation scattering. KE, no. 6, 1983, 1256-1259.

568. Winkelmann, W., and E. Grimm (NS). Optical power meter for lightguide devices. Radio-Fernsehen-Elektronik, no. 1, 1983, 48-49. (RZhR, 5/83, 5Ye428)

569. Zagorskiy, Ya.T., A.F. Kotyuk, and A.A. Kuznetsov (0). Means for measuring the average power of laser radiation. Review. Sb 27, 7-23. (RZhF, 6/83, 6D1174)

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

570. Abayev, M.I. (0). Ellipsometric analysis of inhomogeneous and multilayer structures. Sb 28, 7-9.

571. Abramski, K., Z. Godzinski, and E. Jankowska (NS). Laser interferometer for measuring small amplitudes of periodic oscillations. Pomiary, automatyka, kontrola, no. 8-9, 1982, 239-241,286-287. (RZhR, 5/83, 5Ye434)

572. Aleksandrov, V.K., V.P. Il'in, and S.V. Pryadchenko (299). Device and method for determining the geometric dimensions of extended objects. Otkr izobr, no. 18, 1983, 1017918.

573. Alekseyev, S.A., I.G. Bronshteyn, V.T. Prokopenko, and V.S. Rondarev (0). Automatic CO_2 laser ellipsometer. Sb 28, 116-118.

574. Alekseyev, V.V., D.S. Badalov, and V.L. Chudov (19). Electron-acoustic interference signal analyzer in thermophysics experiments. Tr 4, 48-53.

575. Algazin, Yu.B. (0). Ellipsometric model of adsorption-desorption processes in a silicon-oxygen system. Sb 28, 52-58.

576. Altukhov, A.M., and T.I. Yatskova (0). Determining the index of refraction by means of a diffraction grating. OiS, v. 54, no. 6, 1983, 1102-1106.

577. Antonov, V.A., O.S. Dron', and V.I. Pshenitsyn (0). Ellipsometry of inhomogeneous surface layers and films. Sb 28, 9-13.

578. Aref'yev, I.M., A.I. Boriskin, A.S. Bryukhanov, A.K. Komleva, R.I. Utyamyshev, and Ye.D. Chistov (558,610). Determining the composition of industrial aerosols by laser mass-spectroscopy. Gigiyena truda i professional'nyye zabolevaniya, no. 6, 1983, 48-49.

579. Ayupov, B.M., N.P. Sysoyeva, and A.A. Titov (0). Optical study on a system of indium antimonide--anode oxide film. Sb 28, 83-86.

580. Babonas, G.A., and A.A. Reza (0). Ellipsometric study on piezo-gyrational constants in crystals. Sb 28, 29-31.

581. Bagayev, S.N., B.D. Borisov, V.G. Gol'dort, A.Yu. Gusev, A.S. Dychkov, V.F. Zakhar'yash, V.M. Klement'yev, M.V. Nikitin, B.A. Timchenko, V.P. Chebotayev, and V.V. Yumin (0). Optical time standard. Avtometriya, no. 3, 1983, 37-58.

582. Barannikov, A.L., N.M. Ganzherli, S.B. Gurevich, V.B. Konstantinov, I.A. Maurer, S.A. Pisarevskaya, B.F. Ryadinskiy, A.A. Serebrov, V.N. Sobolev, V.M. Stolovitskiy, M.S. Cheberyak, and D.F. Chernykh (0). Holography in studies of electrophoresis processes conducted on the Salyut-7 space station. ZhTF P, no. 11, 1983, 659-662.

583. Bayborodin, Yu.V., and V.A. Chadyuk (0). Adaptive control of a coherent angular velocimeter. IVUZ Radioelektr, no. 11, 1982, 85-87. (RZhR, 5/83, 5Ye445)

584. Belyakov, G.M., V.A. Veselov, G.V. Gerkhen-Gubanov, V.G. Kuznetsov, L.N. Polyankov, P.S. Sologub, and S.Yu. Tilli (0). Device for determining the space in front of a transport vehicle. Otkr izobr, no. 23, 1983, 1024719.

585. Bendere, R.B., R.P. Kalnynya, I.A. Feltyn', I.R. Freyvalde, I.E. Eglitis, and I.A. Eymanis (0). Ellipsometric analysis of the transition region in $Si-SiO_2$. Sb 28, 58-61.

586. Bendere, R.B., R.P. Kalnynya, I.A. Feltyn', I.E. Eglitis, and I.A. Eymanis (0). Ellipsometric characteristics of the surface of silicon after processing in a chlorine-containing high-frequency plasma. Sb 28, 86-89.

587. Bergner, H., V. Brueckner, and B. Schroeder (GDR). Study on rapid flow processes in semiconductors in the picosecond range. KE, no. 6, 1983, 1150-1159.

588. Bernukhov, V.S., and V.L. Selezneva (0). Possibility of developing a super-achromatic phase-shifting device. Sb 28, 121-123.

589. Bilenko, D.I., B.A. Dvorkin, V.P. Polyanskaya, and S.N. Krasnobayev (0). Ellipsometry of dielectric layers during their formation. Sb 28, 89-93.

590. Bilenko, D.I., and B.A. Dvorkin (0). Ellipsometric control of inhomogeneous dielectric layers. Sb 28, 93-96.

591. Blyumkina, Yu.A. (0). Current problems and prospects for developing the automation of ellipsometric measurements. Sb 28, 103-116.

592. Blyumkina, Yu.A., and A.V. Arkhipenko (0). Precision ellipsometric methods for studying amorphous transparent materials. Sb 28, 118-121.

593. Bogomolov, N.F., and S.N. Khotyaintsev (0). Multichannel fiberoptic Doppler velocimeter. IVUZ Radioelek, no. 5, 1983, 59-63.

594. Bondarenko, V.M., L.V. Grashoven', A.F. Kustovskiy, and Ye.Ye. Lumpov (0). Using a laser method to study geodynamic activity in tectonic zones. Deposit at VINITI, no. 21-83, 3 Jan 1983. (DNR, 5/83, 343)

595. Boyko, V.M., T.P. Gavrilenko, V.V. Grigor'yev, A.A. Karnaukhov, Yu.A. Nikolayev, and A.N. Papyrin (0). High-speed laser visualization of particles accelerated by a detonation wave. FGiV, no. 3, 1983, 126-133.

596. Brodskiy, A.M., and M.I. Urbakh (0). Dependence of ellipsometric parameters on the microscopic properties of a surface. Sb 28, 13-16.

597. Brunfeld, A., T. Mestes, Gh. Popescu, and C. Blanaru (NS). Laser-controlled autonomous interferometer. Patent Romania, no. 76478, 30 Mar 1981. (RZhR, 5/83, 5Ye475)

598. Brunfeld, A., and T. Mestes (NS). Laser device. Patent Romania, no. 76479, 30 Mar 1981. (RZhR, 5/83, 5Ye474)

599. Brykov, V.G., and A.V. Mochalov (110). Error in the triaxial assembly of laser gyroscopes with a general initial misalignment. IVUZ Priboro, no. 6, 1983, 54-59.

600. Brzhozovskiy, B.M., V.V. Bondarev, A.A. Ignat'yev, and V.V. Martynov (317). Two-coordinate interferometer for measuring linear motion. Otkr izobr, no. 19, 1983, 1019233.

601. Davydov, V.V., Yu.I. Fedyukovskiy, and A.G. Selitskiy (110). Passive holography for studying natural and artificial objects in nature. Tr 2, 41-44.

602. Drenckhan, J., J. Roepcke, and K.D. Salweski (NS). Electronic computer unit for laser rectilinearity measurement. Radio-Fernsehen-Elektronik, no. 1, 1983, 45-47,48. (RZhR, 5/83, 5Ye450)

603. Drobnik, A., K. Rozniakowski, and R. Kazana (NS). Multifunctional optical system for laser technology. Opt app, no. 1, 1982, 122-124. (RZhF, 6/83, 6D981)

604. D'yakonov, O.M. (219). Method for recording the parameters of high-speed stamping. IAN B Fiz-tekh, no. 3, 1983, 11-14.

605. Finarev, M.S. (0). Solving an inverse ellipsometric problem on a microcomputer. Sb 28, 22-25.

606. Garkavenko, A.S., V.V. Kalendin, V.I. Kukhtevich, Ye.V. Pronin, V.Ya. Sup'yan, V.P. Savlyuk, and V.A. Fedoseyev (0). Phase meter. Otkr izobr, no. 19, 1983, 969102.

607. Gavrilo, V.P., A.S. Gorshkov, I.P. Ivanov, and V.V. Yakovlev (175). Results of using laser instruments to measure deformations in a sea ice cover under natural conditions. Tr 5, 68-75.

608. Gogitidze, N.Z., V.K. Yeremin, V.L. Kashevarov, L.N. Pavlyuchenko, G.A. Sokol, N.B. Strokan, and O.P. Chikalova-Luzina (1,4). Amplitude-time analysis study on microscopic inhomogeneities in semiconductors. KSpF, no. 6, 1983, 42-46.

609. Gol'dort, V.G., V.F. Zakhar'yash, V.M. Klement'yev, M.V. Nikitin, B.A. Timchenko, and V.P. Chebotayev (159). Development of optical time scales. Sb 24, 290-294.

610. Gromov, V.K., and S.I. Kol'tsov (0). Anomalous behavior of ellipsometric parameters of a system of a substrate--titanium oxide layer, observed in the synthesis of a layer by molecular deposition on the surface of dielectrics, semiconductors and metals. Sb 28, 73-76.

611. Gusev, V.M., and V.A. Logachev (0). Quantum frquency standard and time. Otkr izobr, no. 26, 1982, 943633. (RZhR, 5/83, 5Ye438)

612. Gushchin, Ye.M., A.N. Lebedev, S.V. Somov (16), and S.S. Zemtsov (1). Simulation of particle tracks by a laser beam. Fizicheskiy institut AN SSSR. Preprint, no. 253, 1983, 33 p.

613. Havel, S., J. Kadlec, and F. Kasak (NS). Nondestructive operational control and inspection in nuclear power plants. Prospective methods for operational inspection of primary loops. Jaderna energie, no. 11, 1982, 392-407. (RZhF, 5/83, 5V1123)

614. Hruby, V. (NS). Experiment on measuring distances with an LA-3000 laser interferometer. Sb 4, 137-140. (Avtometriya, no. 3, 1983, 112)

615. Il'yushchenko, N.V., L.P. Svirina, and V.N. Severikov (O). Polarization characteristics of radiation from a gas ring laser with an anisotropic resonator. OiS, v. 54, no. 5, 1983, 874-876.

616. Jankowska, E. (NS). Applicability of holographic and speckle interferometries in the plate bending problem. Opt app, no. 1, 1982, 125-129. (RZhR, 6/83, 6Ye276)

617. Kala, A. (NS). How electrooptic rangefinders work. Sdelovaci technika, no. 12, 1982, 452-454. (RZhR, 5/83, 5Ye455

618. Kartamyshev, M.G., Yu.L. Nurov, E.I. Rau, G.V. Spivak, M.N. Filippov, and V.A. Chubarenko (O). Scanning optical microscopy study of breakdown of metal-dielectric-semiconductor integrated circuits. IAN Fiz, no. 6, 1983, 1108-1114.

619. Kasatkin, E.V. (O). Complex of new programs to process the results of ellipsometric measurements. Sb 28, 16-19.

620. Kashcheyeva, G.A., and V.S. Sobolev (O). Theory on the processing threshold for a Doppler signal. Avtometriya, no. 3, 1983, 62-68.

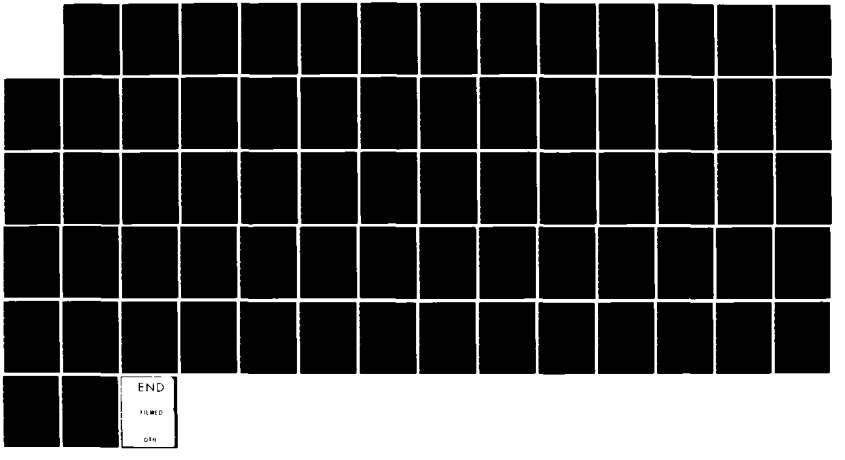
621. Khesin, G.L., I.V. Zhavoronok, D.I. Omel'chenko, V.I. Khe, I.G. Leont'yeva, and S.A. Litvin (O). Use of holographic interferometry in static and dynamic photoelasticity studies. Bauforschung-Baupraxis, no. 107, 1982, 16-20,4,5,6. (RZhF, 6/83, 6D997)

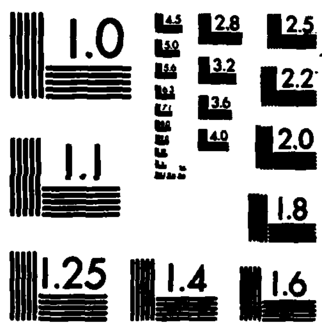
622. Khromushin, V.A. (O). Device for laser trimming of film resistors. Otkr izobr, no. 9, 1983, 1003157.

623. Kisling, A. (7). Measuring a dynamic macroscopic surface profile. OMP, no. 5, 1983, 11-15.

AD-A146 189 BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS NUMBER 65 MAY - JUNE 1983(U) DEFENSE INTELLIGENCE AGENCY WASHINGTON DC DIRECTORATE FOR SCI.. 15 MAY 84 2/2

UNCLASSIFIED DIA-DST-2700Z-003-84 F/G 20/5 NL





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

624. Kladov, S.V., and A.D. Smirnova (1). Submillimeter interferometer system for measuring the radial density profile of a plasma in an L-2 stellarator. Fizicheskiy institut AN SSSR. Preprint, no. 268, 1983, 13 p.

625. Kleinsteuber, W., an W.R. Letzsch (NS). Method for surface monitoring of diffusely or weakly reflecting objects. Patent GDR, no. 154240, 3 March 1982. (RZhR, 6/83, 6Ye213)

626. Klim, B.P., and Ye.P. Pochapskiy (81). Results of the development and testing of a pulsed electrophotometer. Sb 15, 51-54. (RZhF, 6/83, 6D1279)

627. Kokin, Yu.N., and V.V. Leonov (0). Laser system for measuring deviation in the shape and position of surfaces. IT, no. 5, 1983, 27-30.

628. Kolomiyets, S.M. (7). Dual-beam interferometer with doubled sensitivity. OMP, no. 6, 1983, 30-31.

629. Kol'tsov, S.I., V.K. Gromov, and V.B. Aleskovskiy (0). Immersion ellipsometry study on a system of a single-crystal silicon--hyperfine titanium oxide layer synthesized by molecular deposition. Sb 28, 70-73.

630. Kompanets, I.N., and A.N. Malov (1). Laser methods for contactless diagnostics of industrial products. Fizicheskiy institut AN SSSR. Preprint, no. 184, 1983, 39 p.

631. Konev, V.A., N.N. Pun'ko, B.B. Sevruk, and V.V. Filippov (0). Determining the dielectric constants of anisotropic layers by in-transit radiowave ellipsometry. Sb 28, 146-147.

632. Korshunov, I.P., G.I. Ladanov, and P.P. Shevchenko (0). Energy relations in a laser Doppler velocimeter with a subcarrier. RiE, no. 5, 1983, 1013-1016.

633. Kositsyn, V.Ye., and V.A. Tabarin (0). Device for measuring the parameters of magnetic diffraction gratings. IT, no. 6, 1983, 46-47.

634. Kostina, L.V., Ye.G. Kuznetsova, V.M. Novakovskiy, and Ya.M. Kolotyrkin (0). Ellipsometric study on the photostimulated growth of anode films on passive titanium. Sb 28, 76-79.

635. Kozlov, V.V. (0). Optical method for controlling the diameter of objects, using a photosensitive scanning pattern. IT, no. 6, 1983, 25-27.

636. Krumin', A.E., A.V. Knyaz'kov, A.S. Saykin, and Ya.A. Seglin'sh (109,29). Holographic study on photoinduced charge transfer in PLZT 9.2 transparent ferroceramic. FTT, no. 5, 1983, 1570-1572.

637. Kudryavtseva, Z.I., A.G. Pshenichnikov, L.A. Burkal'tseva, N.A. Zhuchkova, and N.A. Shumilova (0). Ellipsometric and electrochemical study of oxygen and hydrogen adsorption on compact nickel. Sb 28, 79-82.

638. Kuts, P.S., V.V. Mar'venko, and A.G. Filin (51). Measurement of angular velocities by light with a rotating polarization plane. IVUZ Priboro, no. 5, 1983, 64-69.

639. Kuz'min, V.L., and A.V. Mikhaylov (0). Determining the physical and chemical characteristics of surface layers by the results of ellipsometric experiments. Sb 28, 19-22.

640. Lemesh, N.I., and L.A. Senchuk (0). Holographic interferometry study on transparent phase inhomogeneities. Sb 29, 97-105. (RZhF, 5/83, 5D899)

641. Letunov, A.A. (65). Development and application of amplitude calibration for plasma diagnostics by the scattering of laser radiation. Institut fizicheskikh problem AN SSSR. Dissertation, 1982, 18 p. (KLD, 6/83, 8822)

642. Liyd'ya, G.G., A.E. Lykhmus, and U.Kh. Nagel (492). Optical cell for measuring temperatures of less than 1 K. PTE, no. 1, 1983, 173-176.

643. Lodi, M.N. (170). Optical device for measuring small linear dimensions. Otkr izobr, no. 23, 1983, 1024702.

644. Lukin, A.V., K.S. Mustafin, S.V. Mavrin, R.A. Rafikov, and I.A. Toporkova (0). Device for controlling aspherical surfaces. Otkr izobr, no. 18, 1983, 1017923.

645. Luk'yanov, D.P., and Yu.V. Filatov (0). Characteristics of interference of opposed waves in a ring laser with an independent coordinate system. OiS, v. 54, no. 6, 1983, 1083-1086.

646. Lyamshev, L.M., and Yu.Yu. Smirnov (21). Fiberoptic acoustic receivers. Akusticheskiy zhurnal, no. 3, 1983, 289-308.

647. Mardezhov, A.S., A.I. Semenenko, and T. Khasanov (0). Temperature dependence of compensator parameters. Sb 28, 137-140.

648. Maslenok, Ye.D., D.K. Mynbayev, and E.Ye. Fradkin (0). Scale factor variation in a ring laser. OiS, v. 54, no. 5, 1983, 822-825.

649. Maykevich, I.A., P.I. Drozd, and L.V. Poperenko (0). Universal ellipsometric device based on a non-null measurement method. Sb 28, 164-166.

650. Melkonyan, A.L., and V.N. Razmyshlyayev (110). Optoelectronic system for nondestructive monitoring of parabolic reflectors consisting of polymer materials. Tr 2, 17-20.

651. Mensov, S.N. (0). The structure of images in coherent systems with real objectives. OiS, v. 54, no. 5, 1983, 866-873.

652. Meyerovich, G.A., and V.N. Ulasyuk (0). Thermovacuum processing of a laser e-beam tube. Otkr izobr, no. 22, 1983, 1023442.

653. Mikhaylov, B.D., and L.L. Balyberdin (318). High-voltage optoelectronic switch. Otkr izobr, no. 18, 1983, 1018248.

654. Mikhaylov, Ye.L. (1). CO_2 $^{192}OsO_4$ and He-Ne $^{129}I_2$ lasers with active frequency stabilization and their introduction into metrological practice. Fizicheskiy institut AN SSSR. Dissertation, 1982, 18 p. (KLD, 6/83, 8832)

655. Min'ko, L.Ya., and Ye.A. Kostyukevich (3). Device for measuring the refractive index of transparent media. Otkr izobr, no. 20, 1983, 803640.

656. Mishchenko, Yu.V. (0). Analysis of phase distortion in an automatic laser refractometer. IT, no. 6, 1983, 42-44.

657. Mustafina, L.T., R.V. Fedot'yeva, N.P. Kutikova, and N.A. Petranovskiy (7). Study on the feasibility of a mirror hologram analyzer. OMP, no. 5, 1983, 19-21.

658. Nesterov, V.V. (7). Study on laser displacement meters. OMP, no. 6, 1983, 6-8.

659. Nikolayenya, A.Z., V.A. Shulakov, N.A. Golikova and I.I. Kolesnik (87). Holographic method for measuring the temperature of semiconductor devices and integrated circuits. VBU, no. 2, 1983, 3-6.

660. Noeldechen, A. (NS). New microscopy working with laser beams. Elektronische Produktion und Prüftechnik, no. 3, 1983, 74-75. (RZhR, 6/83, 6Ye224)

661. Odarich, V.A., and V.A. Ruban (0). Ellipsometric studies of surface layers obtained by diffusion of impurities in garnet structures. Sb 28, 96-99.

662. Ozolin'sh, M. (0). Equipment for measuring transient electrooptic response with nanosecond time resolution. ETP, no. 6, 1982, 551-556. (RZhF, 6/83, 6D935)

663. Pakhomov, A.G., V.Ya. Posyl'nyy, and A.F. Konstantinova (0). Use of ellipsometry to study crystals. Sb 28, 31-35.

664. Pen'kovskiy, A.I. (0). Ellipsometric methods for measuring optical constants in media during frustrated total internal reflection. Sb 28, 140-142.

665. Petru, F., J. Krsek, B. Popela, and A. Steiskal (NS). Laser interference measuring systems. Sb 4, 47-63. (Avtometriya, no. 3, 1983, 112)

666. Pilipko, D.D., and I.P. Pugach (0). Precision interference ellipsometer. Sb 28, 143-146.

667. Pinchuk, G.A., and A.A. Stotskiy (0). Use of radioholography to study surface reflections from variable-profile antennas. Sb 30, 256. (RZhR, 6/83, 6Ye267)

668. Pospisil, J., and J. Janota (NS). Device for accurate determination of the center of a light beam. Author's certificate Czechoslovakia, no. 201660, 15 Aug 1982. (RZhR, 6/83, 6Ye171)

669. Pun'ko, N.N., and V.A. Konev (0). Use of radiowave ellipsometry for quality control of dielectric films. Sb 28, 147-149.

670. Rigalin, V.G., D.A. Grechinskiy, and V.A. Klochko (395). Device for shock-testing objects. Otkr izobr, no. 39, 1982, 968659.

671. Rzhanov, A.V., and K.K. Svitashev (0). Ellipsometric methods for stuyding surfaces and thin films. Sb 28, 3-6.

672. Sanda, V. (NS). Use of an LA-3002 interference laser measuring system for determining the size of length scales in geodesy. Geodeticky a kartograficky obzor [Czechoslovakia], no. 6, 1983, 152-158.

673. Shafer, V.I. (0). Device for controlling semiconductor structures by photoresponse. Otkr izobr, no. 25, 1983, 1027653.

674. Shaykevich, I.A., and L.V. Poperenko (0). Ellipsometric study on the structure of the fundamental absorption band of nickel and $Ni_{0.91}$-$Mn_{0.09}$ alloy in the near UV. Sb 28, 40-42.

675. Shcheglov, Yu.D., and V.S. Solov'yev (0). Device for controlling the shape of mirrors. Otkr izobr, no. 9, 1983, 1002828.

676. Shepelin, V.A. (0). Use of an ellipsometric method in corrosion electrochemical studies. Sb 28, 43-52.

677. Shirshov, Yu.M., A.V. Nabok, and A.M. Dochenko (0). Layered etching study on the refractive index profile of inhomogeneous dielectric layers. Sb 28, 100-102.

678. Shishagin, A.A. (90). Structure of scattered radiation in laser scanning systems. IVUZ Priboro, no. 6, 1983, 83-88.

679. Shutov, A.M., V.V. Kazantsev, and A.K. Kazakov (0). Scanning ellipsometer. Sb 28, 166-169.

680. Sluzhbin, Yu.A., and G.F. Temerti (274). Magnetooptic device for recording hysteresis loops in epitaxial films of rare-earth ferrogarnets. PTE, no. 3, 1983, 156-158.

681. Starikovskiy, G.P., and V.N. Sakharov (254). Holographic interferometry study on stress distribution in photoelasticity. Deposit at VINITI, no. 192-83, 12 Jan 1983, 11 p. (DNR, 5/83, 560)

682. Stashchuk, V.S., and V.I. Shkurat (0). Ellipsometric study on the effect of an oxide layer on the optical characteristics of various transition metals. Sb 28, 35-37.

683. Stashchuk, V.S. (0). Ellipsometric study on the electron structure of Fe-Co alloys. Sb 28, 38-40.

684. Svirid, V.A. (0). Fiber sensors for measuring the level of a liquid. IVUZ Radioelek, no. 5, 1983, 91-92.

685. Svitasheva, S.N. (0). Possibility of combining ellipsometry and spectrointerferometry, for example in a $Si-SiO_2$ system. Sb 28, 149-153.

686. Taganova, V.A., and O.K. Taganov (7). Using speckle optics for the study of slightly rough surfaces. OMP, no. 6, 1983, 52-57.

687. Tibilov, A.S., and Ye.S. Kulik (0). Electrooptically modulated pulse ellipsometer. Sb 28, 153-155.

688. Trofimov, V.A. (0). Interference ellipsometry. Sb 28, 155-157.

689. Uryvskiy, Yu.I., and A.A. Churikov (0). Widebeam survey ellipsometry. Apparatus. Measurement methods. Sb 28, 157-163.

690. Valeyev, R.S., R.N. Gizatullin, A.G. Golubev, and V.I. Yagodkin (0). Optical method for local determination of aerosol dispersion from integrated optical scattering methods. IT, no. 5, 1983, 71-74.

691. Vasin, B.L., A.Ye. Danilov, Ye.Ye. Zhuravlev, V.M. Zubkov, Yu.A. Mikhaylov, L.P. Silyachevskaya, G.V. Sklizkov, L.K. Subbotin, S.I. Fedotov, and S.A. Chaushanskiy (1). Diagnostic system with automatic recording for high-power shock waves. PTE, no. 3, 1983, 140-142.

692. Velichko, G.I., and V.A. Benderskiy (67). Study on a double electric layer by a temperature jump method. Elektrokhimiya, no. 5, 1983, 621-629.

693. Velikodnyy, L.N., V.A. Shepelin, and E.V. Kasatkin (0). Ellipsometry of a ruthenium electrode. Sb 28, 61-66.

694. Veselovskiy, A.B., and A.S. Mitrofanov (30). Device for controlling the diameter of transparent fibers. Otkr izobr, no. 9, 1983, 1002832.

695. Vlasov, V.N., Yu.A. Konchevoy, Ye.N. Kudryavtsev, R.R. Rezvyy, and M.S. Finarev (0). Optimization of the design and parameters of ellipsometers for microelectronics. Sb 28, 123-127.

696. Voges, E. (0). Independent measurements of optical amplitude and phase by single sideband detection. Sb 16, 266-274. (RZhF, 6/83, 6D875)

697. Vorontsova, Ye.I., V.K. Grigor'yev, and V.I. Petrovskiy (0). Possibilities of a photometric method for automation of an IR ellipsometer. Sb 28, 128-130.

698. Yakovlev, V.A. (0). Allowance for small imperfections of optical elements in the ellipsometry of anisotropic surfaces. Sb 28, 25-28.

699. Yegorova, G.A., E.S. Lonskiy, Ye.V. Potapov, A.V. Rakov, and T.V. Sadovaya (0). Determining the linear dimensions of diffraction grating elements from the dependence of ellipsometric parameters on the order of diffraction at various angles of incidence. Sb 28, 130-133.

700. Yegorova, G.A., E.S. Lonskiy, Ye.V. Potapov, A.V. Rakov, and T.V. Sadovaya (0). Null-order ellipsometry to determine the parameters of SiO_2-Si structure diffraction gratings. Sb 28, 134-137.

701. Yesepkina, N.A., Yu.K. Zverev, B.A. Kotov, A.P. Lavrov. P.A. Fridman, and O.V. Chukanov (0). Laser leveler for adjusting radiotelescopes. Sb 30, 257-258. (RZhR, 6/83, 6Ye211)

702. Zakharov, P.P., and L.A. Smirnov (0). Device for measuring the optical characteristics of retroreflectors. Otkr izobr, no. 24, 1983, 1026105.

703. Zhulanov, Yu.V., O.N. Nikitin, K.G. Saprykin, I.A. Nevskiy, B.F. Sedovskiy, and I.V. Petryanov (122). Laser particle counter. PTE, no. 3, 1983, 177-180.

704. Zodelava, D.G. (67). Optical holographic study on the time-resolved stress deformation state of construction elements consisting of polymer materials. Institut khimicheskoy fiziki AN SSSR. Dissertation, 1982, 20 p. (KLD, 5/83, 7000)

705. Zorin, Z.M., and M.N. Churayeva (0). Construction of an optical model of a reflecting system from an ellipsometric study of physical and chemical processes. Sb 28, 66-70.

706. Zverkov, M.V., L.A. Rivlin, and N.V. Shchelkov (141). Fiberoptic interferometer using a multimode lightguide pumped by an injection heterolaser. KE, no. 5, 1983, 1048-1049.

2. Laser-Excited Optical Effects

707. Bagdasaryan, D.A., A.O. Makaryan, and P.S. Pogosyan (37). Cerenkov radiation from a dispersing nonlinearly polarized medium. ZhETF P, v. 37, no. 10, 1983, 498-500.

708. Basun, S.A., A.A. Kaplyanskiy, and S.P. Feofilov (4). Photoinduced polar structure in ruby crystals. ZhETF P, v. 37, no. 10, 1983, 492-495.

709. Baubinas, R., Yu. Vishchakayte, F. Senulis, and Yu. Storasta (49). Magnetic resistance and photoconductivity of high-ohm $CdCr_2Se_4$ under laser excitation. Sb 2, 83.

710. Beterov, I.M., and N.V. Fateyev (0). Optogalvanic effects in molecular iodine due to positive and negative ionization. OiS, v. 54, no. 6, 1983, 978-986.

711. Bogdankevich, L.S., V.K. Grishin, and M.F. Kanevskiy (98). Excitation of a solid-plasma surface wave generator by a relativistic e-beam. IVUZ Fiz, no. 5, 1983, 56-60.

712. Bozhevol'nyy, S.I., Ye.M. Zolotov, P.G. Kazanskiy, A.M. Prokhorov, and V.A. Chernykh (1). Photogalvanic mechanism for reversing the polarization plane of light in Ti:$LiNbO_3$ optical waveguides. ZhTF P, no. 11, 1983, 690-692.

713. Bugayev, A.A., V.V. Gudyalis, and A.V. Klochkov (4). Induced optical anisotropy of vanadium dioxide films under picosecond excitation. FTT, no. 6, 1983, 1890-1892.

714. Burdiyan, I.I., Ye.I. Georgitse, I.F. Mironov, and T.M. Shontsovoy (744). Photoluminescence of ternary indium antimonide solid solutions. Sb 2, 173.

715. Demchina, L.A., D.V. Korbutyak, Yu.V. Kryuchenko, V.G. Litovchenko, R.I. Marchenko, and V.I. Sugakov (6). Polariton effects in InSe containing macroscopic impurities. FTP, no. 6, 1983, 977-984.

716. Dobek, A., M. Klimecki, A. Patkowski, and D. Labuda (NS). Optically-induced birefringence in tRNA solutions. APP, v. A62, no. 5-6, 1982, 431-441. (RZhF, 6/83, 6D393)

717. Fayerman, V.T., Sh.L. Fayerman, Ye.N. Volkova, and V.N. Tanayeva (376). Method for determining nonuniformity of heating of KDP crystals. Otkr izobr, no. 39, 1982, 968632.

718. Fistul', V.I., and A.M. Pavlov (179). Laser implantation of impurities in silicon. FTP, no. 5, 1983, 854-858.

719. Galustashvili, M.V., and D.G. Driyayev (490). Motion of charged dislocations in LiF crystals under the effect of pulsed laser radiation. FTT, no. 6, 1983, 1904-1906.

720. Georgiev, G., T. Kalkanyiev, and Zh. Nikolov (NS). Influence of the space distribution of laser radiation on fluorescence saturation in organic molecules. Bolgarskiy fizicheskiy zhurnal, no. 5, 1982, 558-565. (RZhF, 6/83, 6D682)

721. Georgobiani, A.N., and I.M. Tiginyanu (1). Optical and photoelectric properties of wideband $A^{I}B_{2}^{III}C_{4}^{IV}$ type compounds. Sb 2, 43-44.

722. Gershenzon, Ye.M., Yu.A. Gurvich, A.P. Mel'nikov, and R.I. Rabinovich (162). Inverse distribution of photoelectrons in semiconductors and the possibility of obtaining stimulated emission. Sb 1, 53-54.

723. Goncharenko, V.F., N.N. Kosinov, L.A. Mandych, A.I. Mitichkin, A.N. Papova, T.A. Charkina, A.I. Chubenko, and N.V. Shiran (188). Study on the optical properties of KCl crystals in the 0.18 - 16.0 μm spectral range. Tr 3, 3-8. (RZhF, 6/83, 6D891)

724. Kamarzin, A.A., A.A. Mamedov, V.A. Smirnov, V.V. Sokolov, Yu.P. Timofeyev, and I.A. Shcherbakov (1). Concentration quenching and quantum yield of Nd^{3+} luminescence in γ-La_2S_3 semiconductor crystals and $La_2S_3 \cdot 2Ga_2O_3$ glass. FTT, no. 6, 1983, 1664-1669.

725. Karlov, N.V., A.S. Laguchev, A.N. Orlov, and Yu.N. Petrov (1). Controlling the flow of molecules through a metal capillary by resonant laser radiation. ZhTF P, no. 10, 1983, 598-601.

726. Karlov, N.V., A.N. Orlov, Yu.N. Petrov, and A.M. Prokhorov (1). Energy efficiency of laser-controlled diffusion of gases through a capillary. ZhTF P, no. 11, 1983, 693-695.

727. Kirykhin, N.N., and F.V. Lisovskiy (15). Magnetooptic study on self-modulating vibrations during parametric excitation of spin waves in YIG. FTT, no. 6, 1983, 1675-1678.

728. Kokarev, S.Ye., and V.F. Marchenko (2). Nonlinear resonance in an optically irradiated circuit with a metal-dielectric-semiconductor structure. VMU, no. 3, 1983, 90-92.

729. Kopylov, Yu.L., V.B. Kravchenko, Ye.N. Mirgorodskaya, and A.V. Bobylev (15). Waveguides in lithium niobate and tantalate produced by diffusion of protons from a benzoic acid melt. ZhTF P, no. 10, 1983, 601-604.

730. Kotik, A.F., L.A. Al'bota, and M.Yu. Sakhnovskiy (0). Measuring micellar concentration and micellar mass of solutions of surface active substances by optical scattering. ZhPS, v. 38, no. 6, 1983, 955-961.

731. Kundikov, V.D., A.A. Rogozhin, L.M. Rodionova, I.V. Sil'verstova, A.N. Chernyshev, and O.M. Kugayenko (311). Relationship between stress, microstructure and photoluminescence from deformed NaI-Tl crystals. ZhTF P, no. 9, 1983, 536-540.

732. Lisitsa, M.P., A.V. Stolyarenko, and S.F. Terekhova (6). Exciton generation by pulsed laser irradiation. UFZh, no. 6, 1983, 835-839.

733. Malinovskiy, V.K. (75). Light-induced phenomena of memory in crystals and glasses. Institut avtomatiki i elektrometrii SOAN. Dissertation, 1982, 34 p. (KLD, 5/83, 6926)

734. May, V. (NS). Effect of a high-intensity monochromatic e-m wave on biexciton states in direct-gap semiconductors. Wissenschaftliche Zeitschrift der Humboldt-Universität zu Berlin. Mathematisch-naturwissenschaftliche Reihe, no. 4, 1982, 293-299. (RZhF, 6/83, 6Ye1368)

735. Mekhtiyev, R.F., and V.G. Safarov (0). Angular dependence of two-photon photoconductivity in p-GaS single crystals. Sb 31, 90-94. (RZhF, 6/83, 6Ye1383)

736. Moshnyaga, V.T., V.B. Anzin, V.G. Veselago, K.M. Golant, S.I. Radautsan, and M.A. Chernikov (0). Inhomogeneous absorption of light and surface photoconductivity in $CdCr_2Se_4$ single crystals. Sb 4, 27-28.

737. Mozol', P.Ye., I.I. Patskun, N.A. Skubenko, V.V. Grishchuk, and N.P. Krasnolob (6). Optical transitions induced by laser radiation in $ZnGeP_2$ and $ZnSiP_2$ single crystals. Sb 2, 74.

738. Mushinskiy, V.P., M.I. Karaman, V.I. Gramatskiy, and V.V. Chebotar' (151). Electrooptic characteristics of the structure of amorphous $CdGa_2S_4$ - KD_2PO_4. Sb 2, 41.

739. Myl'nikov, V.S. (0). Optical nonlinearity of photosemiconductor-liquid crystal structures with cholesteric-nematic transitions. ZhTF, no. 6, 1983, 1231-1233.

740. Naboykin, Yu.V., L.A. Ogurtsova, O.S. Pyshkin, and V.A. Tsekhomskiy (0). Study on the process of darkening silver halide photochromic glass from irradiation by short optical pulses. OiS, v. 54, no. 6, 1983, 1049-1053.

741. Orlov, A.N., R.P. Petrov, and Yu.N. Petrov (1). Effect of laser radiation on molecular sorption in a finely porous filter. ZhTF, no. 5, 1983, 883-887.

742. Orlov, A.N., and Yu.N. Petrov (1). Effect of local heating on the diffusion of a gas through a capillary. ZhTF, no. 6, 1983, 1147-1150.

743. Paramonov, G.K., and V.A. Savva (3). Interference mechanism for the formation of hot and cold ensembles of molecules in their laser field. Institut fiziki AN BSSR. Preprint, no. 285, 1982, 41 p. (RZhF, 5/83, 5D996)

744. Prokhorov, A.M., A.S. Svakhin, V.A. Sychugov, A.V. Tishchenko, and A.A. Khakimov (1). Stimulated and resonant conversion of surface e-m waves during irradiation of a solid by high-power laser radiation. KE, no. 5, 1983, 906-912.

745. Shagalov, M.D., and A.G. Drizhuk (0). Anisotropy of radiation from deep centers in GaN. OiS, v. 54, no. 6, 1983, 1025-1028.

746. Shalagin, A.M. (75). Photoinduced drift. Institut avtomatiki i elektrometrii SOAN. Dissertation, 1982, 28 p. (KLD, 6/83, 8757)

747. Shimon, N.Yu., G.D. Puga, and I.D. Rubish (0). Effect of laser radiation on the dispersion of the refractive index in Ge-As-Se system films. Sb 12, 83-86. (RZhF, 6/83, 6D658)

748. Smirnov, B.M. (23). Physics of a highly excited atom. Sb 24, 48-59.

749. Timofeyev, N.T., and Ye.B. Sveshnikova (0). Choosing a multipole approximation in induced resonance theory of nonradiative transitions. OiS, v. 54, no. 6, 1983, 1005-1008.

750. Timoshkin, A.V. (0). Hydrodynamics of a liquid dielectric in a light field. Sb 9, 22-32. (RZhF, 5/83, 5I82)

751. Titsulin, I.V., and K.I. Kozlovskiy (16). Method for controlling the ignition of a spark gap by a laser. Otkr izobr, no. 31, 1982, 953686. (RZhR, 5/83, 5Ye489)

752. Veselago, V.G. (1). Photomagnetism. Sb 2, 11.

753. Vidmont, N.A., A.A. Maksimov, and I.I. Tartakovskiy (66). Measuring the group velocity of polaritons in an anthracene crystal. ZhETF P, v. 37, no. 12, 1983, 578-580.

754. Vorob'yev, L.Ye., V.I. Stafeyev, and D.A. Firsov (29). Kerr effect in free hot charge carriers in semiconductors, allowing for interband transitions. Sb 1, 84-85.

755. Vorob'yev, L.Ye., V.I. Stafeyev, V.A. Shalygin, and A.V. Shturbin (29). Study on collision ionization in i-InSb in weak fields. Sb 1, 156.

756. Yesina, N.P., N.V. Zotova, S.A. Karapdashev, and G.M. Filaretova (4). Metal-semiconductor structure based on p-InAs. FTP, no. 6, 1983, 991-996.

757. Zasavitskiy, I.I., A.V. Matveyenko, B.N. Matsonashvili, and V.T. Trofimov (1). Negative photoconductivity in $Pb_{1-x}Sn_xTe$:In. ZhETF P, v. 37, no. 10, 1983, 456-459.

758. Zel'dovich, B.Ya., S.K. Merzlikin, N.F. Pilipetskiy, A.V. Sukhov, and N.V. Tabiryan (17). Photoinduced Fredericks transition in a field of inclined O-waves. ZhETF P, v. 37, no. 12, 1983, 568-571.

759. Zolotov, S.I., N.V. Trofimova, and A.E. Yunovich (2,45). Photoluminescence in $Pb_{1-x}Cd_xS$ solid solution films. Sb 2, 255.

3. Laser Spectroscopy

760. Akopyan, I.Kh., A.Ye. Monov, and B.V. Novikov (12). Excitons in a crystal with super-ion exchange. ZhETF P, v. 37, no. 10, 1983, 459-461.

761. Alekperov, O.Z., V.G. Golubev, and V.I. Ivanov-Omskiy (4). Submillimeter photoelectric magnetospectroscopy of GaAs in strong electric fields. Sb 1, 55-56.

762. Aleksandrov, Ye.B., and V.S. Zapasskiy (7). Use of lasers in studies on magnetic resonance and magnetic relaxation. Sb 24, 3-11.

763. Alekseyev, V.A., N.G. Basov, M.A. Gubin, V.V. Nikitin, and N.S. Onishchenko (1). Limits to resolution capabilities of laser spectroscopy using frequency resonances. ZhETF, v. 84, no. 6, 1983, 1980-1986.

764. Allakhverdiyev, K.R., T.G. Mamedov, E.Yu. Salayev, G.A. Fariver, and I.K. Efendiyeva (0). Fundamental absorption spectra of $TlInSe_2$ crystals under pressure. Sb 2, 112.

765. Anoshin, A.N., Ye.A. Gastilovich, K.V. Mikhaylova, and D.N. Shigorin (122). Study on the fine structure of the fluorescent spectrum of 1,4,5,8-tetraoxy-9,10-anthraquinone-d_4. ZhFKh, no. 6, 1983, 1505-1509.

766. Antonov, V.A., P.A. Arsen'yev, Kh.S. Bagdasarov, A.M. Kevorkov, D.I. Korolev, and A.V. Potemkin (0). Study on the properties of Y_2O_3-Sc_2O_3 and Lu_2O_3-Sc_2O_3 single crystals activated by neodymium ions. OiS, v. 54, no. 6, 1983, 1033-1038.

767. Avarmaa, R.A. (492). Fine-structure spectra and luminescence kinetics of chlorophyll and its analogs at low temperatures. Institut fiziki AN EstSSR. Dissertation, 1982, 30 p. (KLD, 6/83, 8744)

768. Bagdasarov, Kh.S., V.F. Karyagin, A.R. Pogosyan, and Ye.M. Uyukin (13). Role of impurity states in photoinduced effects in α-$LiIO_3$:Mn crystals. FTT, no. 6, 1983, 1812-1815.

769. Baklanov, Ye.V. (159). Spectroscopy of localized particles. Sb 24, 24-32.

770. Berlovich, E.Ye. (252). Possibility of verifying the predictions of various modern theories on nuclear interactions. Sb 24, 266-278.

771. Beterov, I.M., N.V. Fateyev, and V.P. Chebotayev (0). New resonance from three-photon ionization of sodium. OiS, v. 54, no. 6, 1983, 947-949.

772. Bobrovnikova, I.A., and Yu.G. Katayev (0). Luminescence and electrophysical properties of self-epitaxial $ZnGeP_2$ layers. Sb 2, 56.

773. Borkova, V.N., V.A. Zubov, and A.V. Krayskiy (1). Photometry in a holographic spectroscopic system. KSpF, no. 5, 1983, 24-29.

774. Burakov, V.S., P.A. Naumenkov, and N.V. Tarasenko (0). Study on the fluorescence of atoms in a hollow cathode discharge under laser pumping. ShPS, v. 38, no. 5, 1983, 709-714.

775. Burlakov, V.M. (72). Spectroscopy of phase transitions in strongly anisotropic semiconductor crystals. Institut spektroskopii AN SSSR. Dissertation, 1982, 21 p. (KLD, 5/83, 6958)

776. Darmanyan, S.A. (72). Spectroscopy of surfaces and thin films, allowing for spatial distribution. Institut spektroskopii AN SSSR. Dissertation, 1982, 20 p. (KLD, 5/83, 6981)

777. Denchev, O.Ye. (12). Study on the possibility of developing intracavity dual-beam spectrointerferometry. Leningradskiy GU. Dissertation, 1982, 18 p. (KLD, 6/83, 8793)

778. Denchev, O.Ye., A.G. Zhiglinskiy, N.S. Ryazanov, and A.N. Samokhin (0). Intracavity spectral interferometry. OiS, v. 54, no. 6, 1983, 1087-1092.

779. Dobrzhanskiy, G.F., O.A. Doil'nitsyna, Yu.N. Polivanov (1). Temperature dependence of the intensity of the Raman spectrum for polaritons near a phase transition in an NH_4Cl crystal. KSpF, no. 5, 1983, 54-58.

780. D'ordyay, V.S., V.V. Pan'ko, Yu.V. Voroshilov, and V.Yu. Slivka (0). Raman scattering in new Cu_6PS_5Hal superion crystals (Hal=Cl,Br,I). Sb 12, 87-90. (RZhF, 6/83, 6D646)

781. Dryapiko, N.K., V.F. Kovalenko, and G.P. Peka (0). Impurity photoluminescence of variable composition $Al_xGa_{1-x}As$ solid solutions. FTP, no. 5, 1983, 863-868.

782. D'yakov, Yu.Ye., S.A. Krikunov, S.A. Magnitskiy, S.Yu. Nikitin, and V.G. Tunkin (2). Time-domain coherent Raman spectroscopy of gaseous hydrogen in the Dicke narrowing region. ZhETF, v. 84, no. 6, 1983, 2013-2025.

783. Efendiyev, Sh.M., N.G. Darvishov, V.M. Nagiyev, N.M. Gasanly, and V.T. Gabrielyan (0). Vibrational spectrum of lead molybdate. Sb 31, 82-89. (RZhF, 6/83, 6Ye305)

784. Gangrskiy, Yu.P., B.N. Markov, and Yu.Ts. Oganesyan (52). Laser study on the structure of nuclei. Sb 24, 247-254.

785. Gaponenko, S.V., V.P. Gribkovskiy, L.G. Zimin, and N.K. Nikeyenko (3). Nonlinear absorption in CdS_xSe_{1-x} single crystals. Sb 2, 247.

786. Georgiyevskiy, Yu.S., and V.M. Kopeykin (64). Laser Raman spectrometer. FAiO, no. 5, 1983, 546-549.

787. Gladkov, S.M. (2). Nonlinear optical excitation and probing of vibrationally nonequilibrium assemblies of molecules by an automated spectrum analytical complex. Moskovskiy GU. Dissertation, 1982, 19 p. (KLD, 5/83, 6969)

788. Gorban', I.S., V.V. Grishchuk, P.A. Romanyuk, and I.G. Tregub (51). Impurity absorption spectra of $ZnGeP_2$ crystals. Sb 2, 15.

789. Gorban', I.S., N.P. Gorbachuk, V.K. Maksimov, S.B. Pyatakov, and Z.Z. Yanchuk (0). Optical and photoelectric properties of $ZnGeP_2$ condensates. Sb 2, 63.

790. Gorelik, V.S., L.G. Reznik, and B.S. Umarov (1). Effect of temperature gradient on the polariton Raman spectrum in a lithium niobate crystal. KSpF, no. 5, 1983, 44-48.

791. Irmer, G., W.D. Ersel, and G. Kabisch (NS). Possibility of introducing a modified version of the GDM-1000 diffraction-grating double monochromator for special Raman spectrum studies. ETP, no. 6, 1982, 507-514. (RZhF, 5/83, 5D732)

792. Karapetyan, G.O., B.A. Kiselev, S.N. Konopatkin, L.V. Maksimov, and I.G. Frishman (0). IR emission from unactivated glass pumped by an He-Ne laser. FTT, no. 5, 1983, 1505-1507.

793. Kerimova, T.G., Sh.S. Mamedov, and A.Sh. Khidirov (60). Electron and vibrational spectra of $A^{II}B_2^{III}C_4^{VI}$ compounds. Sb 2, 138.

794. Kleperis, Ya.Ya., Ye.V. Gavrusenok, A.R. Lusis, and G.M. Ramans (0). Structure of amorphous WO_3 films. IAN Lat, no. 5, 1982, 61-63. (RZhF, 5/83, 5Ye100)

795. Kluk, E., A. Hacura, and T.W. Zerda (NS). Raman study of rotational relaxation of liquid CH_2Cl_2. APP, v. A63, no. 1, 1983, 41-44. (RZhF, 6/83, 6D537)

796. Kneipp, K., G. Hinzmann, and D. Fassler (NS). Raman spectroscopy study on polymethine dyes. Wissenschaftliche Zeitschrift der Friedrich-Schiller-Universität Jena. Mathematisch-naturwissenschaftliche Reihe, no. 6, 1982, 1119-1123. (RZhF, 6/83, 6D1023)

797. Kolesova, V.A. (33). Vibrational spectroscopy study on the structure of oxide glasses. FiKhS, no. 3, 1983, 257-267.

798. Korbutyak, D.V., L.A. Demchina, V.G. Litovchenko, and Z.D. Kovalyuk (6). Photoluminescent properties of indium monoselenide intercalated with cadmium. FTP, no. 5, 1983, 814-817.

799. Korniyenko, L.S., A.L. Kotkin, V.V. Mayorshin, V.I. Malakhova, R.M. Umarkhodzhayev, and S.D. Yakubovich (98). Observation of magnetic resonance signals by means of linearly polarized radiation from a tunable injection laser. ZhTF, no. 6, 1983, 1222-1224.

800. Krynetskiy, B.B. (1). Selective laser mass spectrometry of rare-earth element atoms. Sb 24, 33-47.

801. Kulyuk, L.L., S.A. Ratseyev, E.Ye. Strumban, and V.I. Tsytsanu (44). Luminescence kinetics of $CdIn_2S_4$ single crystals. Sb 2, 141.

802. Kulyuk, L.L., and A.A. Shtanov (44). Time-resolved spectra of recombination radiation in cadmium phosphide. Sb 2, 194.

803. Letokhov, V.S. (72). Ways for laser visualization of molecules and spatial localization of molecular bonds. Sb 24, 279-289.

804. Ligeza, M., and A. Kawski (NS). Vibrational analysis of the first excited and ground states for PPO and α-NPO by Shpol'skiy, Raman and IR spectroscopy. APP, v. A62, no. 5-6, 1982, 443-448. (RZhF, 6/83, 6D488)

805. Luk'yanenko, S.F. (0). Quantitative intracavity spectroscopy. Sb 19, 75-90. (RZhF, 6/83, 6D1264)

806. Makarov, A.A. (72). Stochastization of vibrational energy of multiatomic molecules under multiphoton excitation by IR laser radiation. Sb 24, 67-78.

807. Mikhaylov, G.V., B.S. Razbirin, and D.K. Nel'son (4). Fine structure of the ground state of an exciton in a CdS crystal during exciton interaction. FTP, no. 6, 1983, 1060-1063.

808. Mushinskiy, V.P., M.I. Karaman, V.I. Gramatskiy, and V.V. Chebotar' (151). Absorption spectra and photoconductivity of amorphous layers of $CdGa_2S_4$. Sb 2, 145.

809. Nesmelova, L.I., O.B. Rodimova, and S.D. Tvorogov (0). Absorption coefficient of light in the 4.3 μm band wing of CO_2. Sb 19, 4-16. (RZhF, 6/83, 6D426)

810. Nosenko, A.Ye., A.I. Bilyy, and V.M. Luk'yanets (0). Raman scattering in $Ca_3Ga_2Ge_3O_{12}$ single crystals. Sb 12, 135-138. (RZhF, 6/83, 6D652)

811. Novak, I.I., M.F. Kireyenko, V.P. Pukh, and V.A. Lagunov (4). Effect of mechanical stress on the vibrational spectra of quartz glass. FiKhS, no. 3, 1983, 320-322.

812. Oseledchik, Yu.S., and A.I. Burshteyn (581). Nonlinear spectroscopy in a high-power Markov field. IVUZ Radiofiz, no. 6, 1983, 698-740.

813. Parimbekov, Z.A., and Yu.V. Rud' (0). Photoluminescence of p-$CdSiAs_2$<Ga> crystals. ZhPS, v. 38, no. 6, 1983, 1005-1008.

814. Pimenov, Yu.D. (0). Localization of products formed during synchronous photochemical processes in an aluminum hydride lattice. OiS, v. 54, no. 5, 1983, 814-821.

815. Pozhela, Yu.K. (50). Hot electrons in semiconductors. Sb 24, 155-164.

816. Proskuryakova, Ye.V., O.I. Kondratov, N.V. Porotnikov, and K.I. Petrov (179,735). Vibrational spectra of lithium titanate spinels. ZhNKh, no. 6, 1983, 1402-1406.

817. Rubinov, A.N., and V.I. Tomin (3). Laser kinetic spectroscopy of solvated dye molecules. Sb 24, 107-120.

818. Saari, P.M. (492). Problems in studying coherence and relaxation of excitations in a low-temperature solid medium. Sb 24, 199-213.

819. Starikov, V.I., B.N. Makhancheyev, and V1.G. Tyuterev (0). Effect of flexibility in the rotational structure of water vapor and ammonia molecule spectra. Calculation of the dependence of rotational and centrifugal constants on large-amplitude vibrations. Sb 19, 34-54. (RZhF, 6/83, 6D434)

820. Strekalovskiy, V.N., Yu.N. Makurin, and E.G. Vovkotrub (652). Raman scattering study on phase transformation and defects in a ZrO_2-Y_2O_3 system. NM, no. 6, 1983, 925-929.

821. Surmeian, A., A. Lupei, D. Popescu, R.C. Bobulescu, C. Stanciulescu, and I.I. Popescu (NS). Laser intracavity absorption of solids. Sb 3, 378-379. (RZhR, 5/83, 5Ye505)

822. Tikhodeyev, S.G. (1). Study on the condensation of nonequilibrium carriers in semiconductors by means of lasers. Sb 24, 180-191.

823. Vasil'yev, V.V., I.P. Mikhaylovskiy, K.P. Mogil'nikov, A.V. Shanina, and A.Ye. Epov (10). Electroluminescent structure of Si-SiO_2-polycrystalline silicon before breakdown. Mikroelektronika, no. 3, 1983, 268-270.

824. Vasil'yev, V.V., K.P. Balashev, and G.A. Shagisultanova (0). Two components in luminescence from platinum (IV) hexahalide compound complexes. OiS, v. 54, no. 5, 1983, 876-878.

825. Vedeneyeva, G.V., V.M. Krivtsun, Yu.A. Kuritsyn, and Ye.P. Snegirev (0). Study on the effect of Coriolis interaction on ν_2 band transition frequencies for tetrahedral hydrides by means of a spectrometer with tunable injection lasers. OiS, v. 54, no. 6, 1983, 941-944.

826. Vinogradov, Ye.A., A.F. Goncharov, N.N. Mel'nik, and N.M. Gasanly (72,86). Spectroscopy of vibrational states in layered ternary semiconductor single crystals. Sb 2, 34-35.

827. Vishchakas, Yu., and V. Kabelka (506). Absorption spectroscopy of molecules by means of tunable lasers. Sb 24, 295-302.

828. Volkov, V.Ye., I.Yu. Danilov, L.L. Zhidkov, Yu.G. Kovalev, and A.A. Ioganson (634). Lattice vibration frequencies in the Raman spectra of manganese and rhenium decacarbonyl. ZhNKh, no. 6, 1983, 1377-1380.

829. Voropay, Ye.S., V.A. Gaysenok, A.A. Kirsanov, V.A. Sayechnikov, and A.M. Sarzhevskiy (0). Spectral and polarization characteristics of luminescence from solutions of organic molecules during optical quenching. Quenching mechanism. ZhPS, v. 38, no. 6, 1983, 912-918.

830. Voropayev, S.G., and B.A. Knyazev (79). Method for absolute calibration of the recording part of optical systems used in scattering and resonant fluorescence schemes. Institut yadernoy fiziki SOAN. Preprint, no. 141, 1982, 10 p. (RZhF, 5/83, 5D744)

831. Voytsekhovskaya, O.K., Yu.S. Makushkin, O.I. Sulakshina, and V.I. Cherepanov (0). Probability of multiplet transitions in vibrational-rotational spectra. Sb 19, 90-119. (RZhF, 6/83, 6D424)

832. Voytsekhovskaya, O.K., Yu.S. Makushkin, and O.N. Sulakshina (0). Analysis of the effect of intramolecular interactions on the probability of vibrational-rotational transitions in linear molecules. Sb 19, 16-34. (RZhF, 6/83, 6D423)

833. Wilhelmi, B. (Vil'gel'mi) (GDR, article in English). Study on molecular motion in liquids by picosecond spectroscopy. Sb 24, 79-97.

834. Yegorov, S.Yu., and A.A. Krasnovskiy (2). Pulsed laser excitation of photosensitized oxygen luminescence. Decay kinetics in aqueous solutions. Biofizika, no. 3, 1983, 497-498.

835. Zerda, T.W. (NS). High pressure Raman study of gaseous $CHCl_3$ broadened by N_2. APP, v. A63, no. 1, 1983, 95-105. (RZhF, 6/83, 6D514)

836. Zhekov, V.I., T.M. Murina, Yu.N. Polivanov, M.N. Popova, A.M. Prokhorov, and M.I. Studenikin (1). Raman scattering of light in $(Y_{1-x}Er_x)_3Al_5O_{12}$ mixed garnet crystals. FTT, no. 5, 1983, 1510-1512.

837. Zinov'yev, N.N., L.P. Ivanov, V.I. Kozub, and I.D. Yaroshetskiy (4). Exciton transfer by nonequilibrium phonons and their effect on recombination radiation in semiconductors at high levels of excitation. ZhETF, v. 84, no. 5, 1983, 1761-1780.

838. Zolotarev, V.A., and M.P. Frolov (1). Determining the degree of photodissociation of F_2 by temperature measurements using intracavity spectroscopy. KE, no. 5, 1983, 1069-1072.

J. BEAM-TARGET INTERACTION

1. Metal Targets

839. Andreyev, V.K., and V.P. Gavrilin (0). Q-switching of a high-power laser resonator to study the radiation resistance of amorphous films. Sb 32, 50-53.

840. Andriyakhin, V.M., and N.T. Chekanova (0). Various types of coatings used in laser processing of metals. Poverkh, no. 2, 1983, 145-149. (RZhR, 6/83, 6Ye207)

841. Baranovskiy, A.M. (0). Hardening of extruded compound mixtures by laser radiation. FGiV, no. 3, 1983, 95-96.

842. Bulatov, S.M., V.M. Gul'ko, K.I. Koslovskiy, N.F. Kolomiyets, A.V. Kononov, A.S. Tsybin, and V.N. Chervinskiy (16). Energy balance during the interaction of moderately intense laser radiation with solid targets in a vacuum. ZhTF, no. 6, 1983, 1183-1186.

843. Burakov, V.A., and S.S. Fedosiyenko (705). Producing improved wear-resistance by laser hardening of metal instruments. MiTOM, no. 5, 1983, 16-17.

844. Gadalov, V.N., and A.S. Orlov (726). Using an internal friction method to study laser-irradiated materials. IVUZ Fiz, no. 6, 1983, 90-92.

845. Gotra, Z.Yu., and B.A. Goldovanskiy (115). Method for trimming the resistance of thin-film resistors. Otkr izobr, no. 20, 1983, 1020869.

846. Kovalev, A.S., A.M. Popov, and O.B. Pyatigorskaya (98). Effect of local field on the initiation of optical breakdown in microscopic metal structures. ZhTF, no. 5, 1983, 939-941.

847. Nguyen Van Tuong (NS). Measuring the adsorption capacity of an oxide-metal system during its heating by laser radiation at 10.6 μm. BWAT, no. 11, 1981, 91-107.

848. Obishchenko, L.N., N.M. Mikhin, D.A. Dergobuzov, and S.N. Platova (279). Effect of surface layer structures after laser hardening on the wear-resistance of 40Kh steel. MiTOM, no. 5, 1983, 18-19.

849. Uglov, A.A., and Ye.M. Ivanov (0). Evaluating the temperature of laser targets in a high-pressure nitrogen atmosphere. FiKhOM, no. 3, 1983, 12-15.

850. Velikikh, V.S., V.P. Goncharenko, A.V. Romanenko, and V.F. Terent'yev (0). Effect of laser hardening on the mechanical properties of type-45 steel. FiKhOM, no. 3, 1983, 21-25.

851. Veyko, V.P., A.I. Kaydanov, Ye.A. Tuchkova, and Ye.B. Yakovlev (0). Melt flow during laser vaporization of metal films. EOM, no. 3, 1983, 18-21.

852. Vladimirova, O.V. (170). Hardening the working surfaces of high-precision measuring devices by a CO_2 laser. MiTOM, no. 5, 1983, 17-18.

853. Zakharov, N.S. (0). Nonlinear problems in heating thin films by optical radiation. I-FZh, v. 44, no. 6, 1983, 995-1000.

854. Zhiryakov, B.M., A.I. Korotchenko, N.I. Popov, and A.A. Samokhin (1). Effect of hydrodynamic disturbances on laser vaporization of metals with phase boundaries. KE, no. 6, 1983, 1190-1195.

2. Dielectric Targets

855. Borodulin, Ye.Ye., and V.N. Yerofeyev (66). Producing KCl crystals with various concentrations of oxygen-containing impurities. NM, no. 6, 1983, 1030-1031.

856. Demochko, Yu.A., V.V. Azarov, T.I. Bogdanova, and I.F. Usol'tsev (0). Kinetics of cumulative laser damage in transparent dielectrics. KE, no. 5, 1983, 1041-1042.

857. Grigor'yants, A.G., B.G. Kolker, A.I. Petrashko, A.A. Sokolov, and V.M. Tret'yakov (746). Study on the process of gas laser cutting of laminated electrical insulating material. Elektrotekhnika, no. 6, 1983, 26-28.

858. Maldutis, E.K. (506). Optical inhomogeneity in glass induced by the electrostriction and thermal action of laser radiation. Sb 24, 214-227.

859. Nepokoychitskiy, A.G., P.A. Skiba, D.I. Stepanov, and G.V. Tukmachev (321). Method for electroerosion processing. Otkr izobr, no. 1, 1983, 986694.

860. Novikov, N.P. (176). Destruction of plexiglas during compression from all sides under the effect of radiation. Fiziko-khimicheskaya mekhanika materialov, no. 3, 1983, 115-116.

861. Schaefer, D., and G. Herrendoerfer (NS). Fabrication of optical coatings by laser vaporization. Sb 7, 147-155. (RZhF, 5/83, 5D796)

862. Wolf, R., and D. Schaefer (NS). Statistical interpretation of the damage threshold of dielectric layers. Sb 7, 173-184. (RZhF, 5/83, 5D1216)

3. Semiconductor Targets

863. Akhmanov, S.A., S.A. Galyautdinov, N.I. Koroteyev, G.A. Paytyan, I.B. Khaybullin, Ye.I. Shtyrkov, and I.L. Shumay (2,38). Second harmonic generation during laser annealing of gallium arsenide surfaces. KE, no. 6, 1983, 1077-1078.

864. Alekseyev, A.S., M.M. Bonch-Osmolovskiy, T.I. Galkina, I.B. Levinson, and D.P. Utkin-Edin (1,73). Thermalization of nonequilibrium phonons in a-Si:H. ZhETF P, v. 37, no. 10, 1983, 490-492.

865. Avdzhyan, K.E., A.G. Aleksanyan, N.Sh. Belluyan, R.K. Kazaryan, and L.A. Matevosyan (264). Quantum size effects in InSb thin films and $Ga_xIn_{1-x}As_ySb_{1-y}$ quaternary semiconductor compounds obtained by laser sputtering. Sb 1, 92-93.

866. Bazakutsa, P.V., A.M. Prokhorov, V.A. Sychugov, and A.V. Tishchenko (1). Surface condition of germanium and its reaction to the effect of high-power laser radiation. ZhTF P, no. 9, 1983, 541-545.

867. Bazakutsa, P.V., A.M. Prokhorov, V.A. Sychugov, and A.V. Tishchenko (1). Formation of periodic structures on the surface of germanium under the effect of high-power UV radiation. ZhTF P, no. 12, 1983, 705-709.

868. Brodin, M.S., N.A. Davydova, and I.Yu. Shabliy (0). Relation of recombination radiation spectra to the concentration of structure defects in CdS single crystals. PSS, v. B115, no. 2, 1983, 641-647. (RZhF, 6/83, 6Ye979)

869. Ganichev, S.D., S.A. Yemel'yanov, and I.D. Yaroshetskiy (4). Heating of charge carriers in crystals with a complex band structure under the action of high-power submillimeter radiation. Sb 1, 49-50.

870. Gaponov, S.V., and M.D. Strikovskiy (426). Compensation of GaAs by exposure to an erosion laser plasma. ZhTF, no. 6, 1983, 1230-1231.

871. Godakov, S.S., A.B. Klyukvin, and Ye.V. Mikhaylutsa (110). Use of ion-implanted doping to produce low-resistance layers on the surface of germanium. Tr 6, 28-30. (RZhF, 6/83, 6Ye969)

872. Gromov, G.G., and V.B. Ufimtsev (179). Formation of a two-dimensional grating on the surface of InSb under the effect of laser radiation. ZhTF, no. 10, 1983, 580-582.

873. Hedler, H., W. Andra, and G. Goetz (NS). Activation of high As and Sb concentrations in silicon by laser irradiation. PSS, v. A73, no. 2, 1982, 333-338. (RZhF, 5/83, 5Ye841)

874. Komarov, F.F., E.M. Shpilevskiy, P.I. Gayduk, and D.A. Gorbachevskiy (87). Characteristics of p-n junctions produced by laser annealing of ion-implanted layers of silicon. VBU, no. 2, 1983, 27-30.

875. Koren', N.N., V.F. Gremenok, V.A. Ivanov, and I.V. Bondar' (507). $CuInSe_2$ single crystal heterostructures. Sb 2, 139.

876. Kotlyarchuk, B.K., D.I. Popovich, and A.A. Zaginey (511). Possibilities of laser methods for epitaxy of A_2B_6 ternary compound layers. Sb 2, 258.

877. Mal'kovskiy, A.S. (0). Change of phase in semiconductor solid solutions during pulsed annealing. NM, no. 6, 1983, 863-865.

878. Romanov, A.B., M.A. Savchenko, and I.V. Shcherbakov (161). Nonlinear coefficient of reflection for a semiconductor plasma obtained by an ultrashort laser pulse. Sb 1, 112.

879. Semenov, A.A. (7). Optical breakdown of GaAs and GeAs single crystals. Gos opticheskiy institut. Dissertation, 1982, 8 p. (KLD, 5/83, 7067)

4. Miscellaneous Targets

880. Ageyev, V.A., A.F. Gorbach, A.A. Laletina, and S.P. Litvinova (587). Melting of coatings under the effect of laser radiation. DAN B, no. 6, 1983, 520-523.

881. Endert, H., and W. Melle (NS). Laser-induced damage in KDP crystals. The influence of growth ghosts and growth bands. PSS, v. A74, no. 1, 1982, 141-148. (RZhF, 6/83, 6D1241)

882. Fayzullov, F.S., V.I. Kovalev (1), J. Janszky, and R. Voszka (Hungary). Role of Ca and Pb dopants in pulsed 10.6 μm bulk damage of superpure NaCl and KCl crystals. Fizicheskiy institut AN SSSR. Preprint, no. 178, 1983, 11 p.

883. Fedoseyev, D.V., I.G. Varshavskaya, A.V. Lavrent'yev, B.V. Deryagin, V.L. Bukhovets, V.V. Matveyev, V.L. Ruzinov, and T.A. Karpukhina (287). Phase transition in small solid particles under laser heating. DAN, v. 270, no. 4, 1983, 918-922.

884. Gavrilenko, V.I., V.A. Zuyev, T.M. Kalandadze, V.G. Litovchenko, and V.G. Popov (0). Band structure of surface layers of implanted silicon films. Poverkh, no. 3, 1983, 104-107. (RZhF, 6/83, 6Ye1358)

885. Geiler, H.D., E. Glaser, G. Goetz, and M. Wagner (NS). Explosive liquid-phase crystallization of ion-implanted silicon. PSS, v. A73, no. 2, 1982, K161-K163. (RZhF, 5/83, 5Ye838)

886. Kolyano, Yu.M., and I. I. Bernar (511). Thermal stresses in a plate during simultaneous laser processing of both sides. Problemy prochnosti, no. 5, 1983, 36-38.

887. Luchin, V.I., V.I. Cherednik, and A.P. Chirimanov (426). Numerical modeling of inhomogeneously dispersed substances vaporized by pulsed laser radiation. ZhTF, no. 6, 1983, 1172-1175.

888. Lyapakhin, A.B., E.R. Mitropol'skiy, and B.V. Orlov (216). Device for sputtering of films by CO_2 laser radiation. Sb 33, 72-75. (RZhR, 5/83, 5Ye477)

889. Pilipovich, V.A., G.D. Ivlev, V.V. Zhidkov, and V.L. Malevich (299). Pyrometric change of the temperature of silicon during nanosecond laser annealing. ZhTF P, no. 10, 1983, 594-598.

890. Skripnichenko, A.S., and L.S. Glikin (0). Device for material processing by a laser beam. Otkr izobr, no. 1, 1983, 986683.

891. Yepifanov, V.P., and M.A. Faustov (17). Evaluating the cumulative damage in polycrystalline material. ZL, no. 6, 1983, 78-80.

892. Zhuk, F.I., O.S. Lysogorov, and N.I. Chetverikov (0). High-speed laser drilling of small diameter holde in the preparation of printed circuit boards. FiKhOM, no. 3, 1983, 16-20.

K. PLASMA GENERATION AND DIAGNOSTICS

893. Arsenin, A.A., and A.S. Kingsep (0). International Conference on Plasma Physics, Göteborg, Sweden, June 1982. Atomnaya energiya, v. 54, no. 1, 1983, 75-76. (RZhF, 5/83, 5G3)

894. Askar'yan, G.A., and B.M. Manzon (1). Propagation of high-power radiation along the path of discontinuous optical breakdown in gas. ZhTF P, no. 11, 1983, 666-670.

895. Basov, N.G., S.Yu. Gus'kov, V.V. Zverev, and V.B. Rozanov (1). Stationary corona of a spherical plasma under laser irradiation at various wavelengths. Fizicheskiy institut AN SSSR. Preprint, no. 291, 1982, 55 p. (RZhF, 5/83, 5G232)

896. Basov, N.G., M.P. Kalashnikov, Yu.A. Mikhaylov, M.V. Osipov, A.A. Rupasov, G.V. Sklizkov, S.I. Fedotov, and A.S. Shikanov (1). Second harmonic generation and measuring the compression of high-aspect shell targets. ZhETF P, v. 37, no. 8, 1983, 359-362.

897. Basov, N.G., A.A. Yerokhin, Yu.A. Zakharenkov, N.N. Zorev, A.I. Isakov, A.A. Kologrivov, A.I. Nikitenko, Yu.A. Merkul'yev, A.A. Rupasov, G.V. Sklizkov, and A.S. Shikanov (1). Observing the compression of two-stage laser-irradiated shell targets. ZhETF P, v. 37, no. 10, 1983, 503-506.

898. Boriskin, A.I., A.S. Bryukhanov, Yu.A. Bykovskiy, V.M. Yeremenko, and I.D. Laptev (7). Evaluating the effect of volumetric charge of an ion beam in a mass-spectrograph with double focusing and a laser plasma ion source. OMP, no. 6, 1983, 48-51.

899. Borovskiy, A.V. (1). Role of a shockwave in the reflection of a plasma flare from a solid obstruction. Fizicheskiy institut AN SSSR. Preprint, no. 124, 1983, 18 p.

900. Boyko, V.A., B.A. Bryunetkin, F.V. Bunkin, V.I. Derzhiyev, V.M. Dyakin, S.A. Mayorov, I.Yu. Skobelev, A.Ya. Fayenov, A.I. Fedosimov, K.A. Shilov, and S.I. Yakovlenko (1). Effect of solid obstructions on radiation from a recombining laser plasma. Fizicheskiy institut AN SSSR. Preprint, no. 181, 1983, 25 p.

901. Boyko, V.A., B.A. Bryunetkin, F.V. Bunkin, V.I. Derzhiyev, V.M. Dyakin, B.N. Duvanov, V.D. Lysov, I.Yu. Skobelev, V.S. Sulakvelidze, A.Ya. Fayenov, A.I. Fedosimov, and S.I. Yakovlenko (1). Stimulated emission at Be II transitions in a recombining laser plasma. KE, no. 5, 1983, 901-903.

902. Boyko, V.A., B.A. Bryunetkin, F.V. Bunkin, V.I. Derzhiyev, V.I. Korneychuk, S.A. Pikuz, I.Yu. Skobelev, K.A. Shilov, A.Ya. Fayenov, A.I. Fedosimov, and S.I. Yakovlenko (1). Population inversion at levels of H-like fluorine ions in a recombining laser plasma. KE, no. 6, 1983, 1286-1288.

903. Boyko, V.A., B.A. Bryunetkin, F.V. Bunkin, V.I. Derzhiyev, V.M. Dyakin, I.Yu. Skobelev, A.Ya. Fayenov, A.I. Fedosimov, K.A. Shilov, and S.I. Yakovlenko (1). Effect of an obstacle on the radiation and dynamics of laser plasma dispersion. ZhTF P, no. 11, 1983, 673-679.

904. Buyanov, N.B., V.A. Gribkov, N.V. Kalachev, L.I. Krupnik, V.Ya. Nikulin, O.G. Semenov, P.V. Silin, and A.A. Shurygin (1). Device for studying the energy distribution of ions in a laser plasma. KSpF, no. 6, 1983, 7-12.

905. Bykovskiy, N.Ye., V.V. Ivanov, V.V. Lisunov, Yu.V. Senatskiy, and G.V. Sklizkov (0). Rotation of the plane of polarization of laser beams during reflection from transparent spherical shells. OiS, v. 54, no. 5, 1983, 897-901.

906. Danilov, A.Ye., Yu.A. Mikhaylov, F.A. Nikolayev, G.V. Sklizkov, V.V. Sorokin, O.I. Stukov, S.I. Fedotov, V.V. Frolov, S.I. Chebotarev, and A.V. Shelobolin (1). Lasing by relativistic electrons in a laser plasma in the "Del'fin" device. ZhETF P, v. 37, no. 11, 1983, 522-524.

907. Denus, S., J. Chlodzinski, L. Pokora, T. Pisarczyk, M. Scholz, W. Skrzeczanowski, R. Socha, A. Szydlowski, and J. Wolski (NS). Study on the interaction of high-power Nd laser radiation with a plasma focus. BWAT, no. 11, 1981, 37-51. (RZhF, 5/83, 5G171)

908. Dobkin, A.V., and I.V. Nemchinov (0). Thermal radiation from a plasma formed by the interaction of laser radiation with a bismuth target. ZhPS, v. 38, no. 5, 1983, 732-736.

909. Finken, K.H. (NS). Study on a dense Z-pinch plasma. Fortschritte der Physik, no. 1, 1983, 74 p. (RZhF, 6/83, 6G296)

910. Goetz, K. (Russ translit: Getts), M.P. Kalashnikov, A.M. Maksimchuk, Yu.A. Mikhaylov, M. Rabol'd, A.V. Rode, G.V. Sklizkov, S.I. Fedotov, E. Foerster (Ferster), and H. Endert (Kh. Endert) (GDR)(1). Optimization of a spectrograph with a flat crystal for x-ray diagnostics of a laser plasma. Fizicheskiy institut AN SSSR. Preprint, no. 180, 1983, 49 p.

911. Karpov, V.Ya., A.P. Fadeyev, and G.V. Shpatakovskaya (71). Calculating the equation of state of matter in laser fusion problems. Institut prikladnoy matematiki AN SSSR. Preprint, no. 147, 1982, 29 p. (RZhF, 5/83, 5G101)

912. Konov, V.I., P.I. Nikitin, and A.M. Prokhorov (1). Electric phenomena accompanying the breakdown of gases by laser radiation. Fizicheskiy institut AN SSSR. Preprint, no. 295, 1982, 29 p. (RZhF, 5/83, 5G231)

913. Kotel'nikov, S.S., I.G. Lebo, and V.B. Rozanov (1). Effect of spontaneous magnetic fields on the escape of charged thermonuclear particles from a laser plasma. KSpF, no. 1, 1983, 3-8. (RZhF, 6/83, 6D1240)

914. Lazarev, Yu.N., and N.P. Sitnikov (71). Anomalous interaction of laser radiation with a plasma. Institut prikladnoy matematiki AN SSSR. Preprint, no. 152, 1982, 25 p. (RZhF, 5/83, 5G83)

915. Pleshakova, R.P., Ye.V. Ryabov, A.S. Tsybin, and A.Ye. Shikanov (453). Laser neutron generator. Otkr izobr, no. 20, 1983, 814257.

916. Shapiro, V.B., V.F. Shanskiy, S.N. Dmitriyev, and K.I. Finkel'shteyn (0). Multichannel laser device. Otkr izobr, no. 24, 1983, 609382.

917. Shirokov, A.S. (1). Spectrum of light reflected from a plasma corona with a moving cavity. Fizicheskiy institut AN SSSR. Preprint, no. 213, 1983, 11 p.

918. Sitenko, O.G., and I.P. Yakimenko (0). Current problems in plasma physics. Fifth International Kiyev Conference on Plasma Theory and Fifth International Congress on Waves and Instabilities in a Plasma, both in Göteborg, Sweden. AN UkrRSR. Visnyk, no. 6, 1983, 76-84.

919. Valuyev, A.D., B.L. Vasin, V.M. Zubkov, M.Yu. Mazur, Yu.A. Mikhaylov, G.V. Slizkov, S.I. Fedotov, and S.A. Chaushanskiy (1). Multiframe schlieren photography system for recording shockwaves in the "Del'fin-1" device. Fizicheskiy institut AN SSSR. Preprint, no. 172, 1983, 59 p.

920. Valuyev, A.D., B.L. Vasin, R.G. May, A.I. Smelkov, G.V. Sklizkov, and S.I. Fedotov (1). Multiframe high-speed system for interferometric photography of a plasma in experiments on laser fusion. Fizicheskiy institut AN SSSR. Preprint, no. 182, 1983, 28 p.

921. Vergunova, G.A., Ye.G. Gamaliy, S.Yu. Gus'kov, V.Ya. Karpov, V.B. Rozanov, and I.I. Shelaputin (71). Spectrum analysis of self-radiation and obscurograms of a laser plasma. Institut prikladnoy matematiki AN SSSR. Preprint, no. 140, 1982, 22 p. (RZhF, 5/83, 5G81)

922. Volenko, V.V., A.L. Zapysov, A.I. Zuyev, I.M. Izrailev, V.B. Kryuchenkov, V.A. Lykov, and V.A. Podgornov (0). Study on limitations to thermal conductivity by electrons in a laser plasma. KE, no. 6, 1983, 1281-1282.

923. Yerokhin, A.A., Yu.A. Zakharenkov, G.V. Sklizkov, and A.S. Shikanov (1). Radial shift interferometer for diagnostics of an inertially confined plasma. Fizicheskiy institut AN SSSR. Preprint, no. 118, 1983, 18 p.

924. Yershov, B.V., S.B. Kravtsov, A.M. Prokhorov, V.A. Spiridonov, and V.B. Fedorov (1). Supersonic propagation of an optical discharge from the region of microsecond breakdown of air along the path of a neodymium laser beam. ZhTF P, no. 12, 1983, 722-726.

925. Zelenskiy, A.N., and S.A. Kokhanovskiy (485). Laser methods for obtaining polarized protons for accelerators. Sb 24, 255-265.

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

926. Astakhov, A.V., and Yu.M. Shirokov (O). Kurs fiziki. Uchebnoye posobiye. V trekh tomakh. Tom III. Kvantovaya fizika (Physics course. Textbook. In three volumes. Volume III. Quantum physics). Moskva, Nauka, 1983, 240 p.

927. Basov, N.G. (1). Stat'i i vystupleniya (Articles and public appearances). Moskva, Znaniye, 1982, 206 p. (RZhF, 5/83, 5A31)

928. Ceausescu, N. (NS). Contributii la fizica si aplicatiile descarcarilor luminescente (Contributions to the physics and application of a glow discharge). Bucuresti, Academiei, 1982, 218 p. (RZhF, 6/83, 6G353)

929. Dolocan, V. (NS). Fizica jonctiunilor cu semiconductoare (Physics of semiconductor junctions). Bucuresti, Academiei, 1982, 319 p. (RZhF, 6/83, 6Ye1451)

930. Elektronnyye yavleniya v tverdykh telakh i gazakh (Electron phenomena in solids and gases). Azerbaydzhanskiy GU. Tematicheskiy sbornik nauchnykh trudov. Edited by K.I. Efendiyev (86). Baku, 1982, 135 p. (RZhF, 6/83, 6Ye1238)

931. Ellipsometriya - metod issledovaniya poverkhnosti (Ellipsometry: a method for studying surfaces). Edited by A.V. Rzhanov (10). Institut fiziki poluprovodnikov SOAN. Novosibirsk, Nauka, 1983, 180 p.

932. Fizika tverdogo tela (Solid-state physics). Kazanskiy GU (11). Alma-Ata, 1982, 148 p. (RZhF, 6/83, 6Ye10)

933. Fotoprotsessy v gazovoy faze (Photoprocesses in the gas phase). Leningradskiy GU. Mezhvedomstvennyy sbornik. Edited by M.Ye. Akopyan (12). Series: Uspekhi fotoniki, no. 8. 1983, 184 p.

934. Golub', B.I., and A.A. Ketkovich (161). Volokonno-opticheskiye kanaly optiko-elektronnykh priborov (Fiberoptic channels in optoelectronic instruments). Moskovskiy institut radiotekhniki, elektroniki i avtomatiki. 1982, 116 p. (KL, 24/83, 21191)

935. Integral'naya optika, volokonnaya optika i holografiya. II Mezhdunarodnaya shkola po kogerentnoy optike i golografii, Varna, 28 sentyabrya - 3 oktyabrya 1981. Materialy (Integrated optics, fiberoptics and holography. Second International School on Coherent Optics and Holography, Varna, 28 Sep - 3 Oct 1981. Papers). (In Russian and English). Edited by P. Simova (NS), et al. Sofiya, BAN, 1982, 430 p. (RZhF, 5/83, 5D247)

936. Inzhektsionnyye lazery (Injection lasers). Fizicheskiy institut AN SSSR. Trudy, no. 141. This issue edited by Yu.M. Popov (1). 1983, 200 p.

937. Izmeritel'no-informatsionnyye sistemy i izmereniye parametrov lazernogo izlucheniya (Measuring and information systems and the measurement of laser radiation parameters). VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Sbornik nauchnykh trudov. Edited by A.V. Khromov (140). Moskva, 1982, 100 p. (KL, 24/83, 21050)

938. Izmeritel'nyye ustroystva sistem energeticheskoy fotometrii (Measuring devices for energy photometry systems). VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (140). Sbornik nauchnykh trudov. Moskva, 1982, 112 p. (RZhF, 6/83, 6D1173)

939. III Kolloquium Interferenzschichtsysteme (Third Colloquium on Interference Layer Systems). Lindow Mark, 22-26 March 1982. Potsdammer Forschungen, v. B, no. 31, 1982, 1-184. (RZhF, 6/83, 6D902)

940. Koronkevich, V.P., V.S. Sobolev, and Yu.N. Dubnishchev (75). Lazernaya interferometriya (Laser interferometry). Edited by Yu.Ye. Nesterikhin (75). Institut avtomatiki i elektrometrii SOAN. Novosibirsk, Nauka, 1983, 216 p.

941. Kraynov, V.P., and B.M. Smirnov (0). Izluchatel'nyye protsessy v atomnoy fizike (Radiative processes in atomic physics). Moskva, Vysshaya shkola, 1983, 287 p. (RZhF, 5/83, 5A35)

942. Landa, P.S. (0). Avtokolebaniya v raspredelennykh sistemakh (Self-excited oscillations in distributed systems). Moskva, Nauka, 1983, 320 p.

943. Lazernyye peredayushchiye ustroystva v sistemakh svyazi i lokatsii (Laser transmitting devices in communications and ranging systems). Authors listed on inside page: R.Sh. Zagidullin, V.A. Korostelev, V.N. Rozhdestvin, and B.L. Sozinov (24). Edited by V.N. Rozhdestvin (24). Moskovskiy vysshiye tekhnologicheskoye uchilishche, 1983, 29 p. (KL, 23/83, 20217)

944. Obrabotka radiosignalov akustoelektronnymi i akustoopticheskimi ustroystvami (Radio signal processing by acoustoelectronic and acoustooptic devices). Edited by S.V. Kulakov (0). Leningrad, Nauka, 1983, 116 p.

945. Optika okeana (Optics of the ocean). Vol. 1. Fizicheskaya optika okeana (Physical optics of the ocean), 372 p. Vol. 2. Prikladnaya optika okeana (Applied optics of the ocean), 237 p. Both volumes edited by A.S. Monin (69). Institut okeanologii AN SSSR. Moskva, Nauka, 1983.

946. Optiko-fizicheskiye sredstva issledovaniya yestestvennykh i iskusstvennykh ob"yektov (Optophysical means for studying natural and artificial objects). Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 327. Edited by Ye.G. Pashchenko, V.A. Zaytsev, M.A. Kropotkin, A.V. Mezenov, and A.L. Melkonyan (110). 1983, 96 p.

947. Perelomova, N.V., and M.M. Tagiyeva (0). Zadachnik po kristallofizike (Problem book on crystal physics). 2nd edition, revised. Moskva, Nauka, 1982, 287 p. (RZhF, 5/83, 5A37)

948. Plazma i neustoychivosti v poluprovodnikakh. Simpozium, Vil'nyus, 15-17 noyabrya 1983. Tezisy dokladov (Plasma and instabilities in semiconductors. Symposium, Vilnius, 15-17 Nov 1983. Summaries of the reports). Institut fiziki poluprovodnikov AN LitSSR (50). Vil'nyus, 1983, 168 p.

949. Prenos informaci na optickych kmitoctech (Information transmission at optical frequencies). (In Czech). Edited by J. Savel. Praha, SNTL, 1982, 183 p. (RZhR, 5/83, 5Ye327)

950. Prikladnaya optika (Applied optics). Authors listed on inside page: A.S. Dubovik, M.I. Apenko, G.V. Durevko, A.M. Zhilkin, L.A. Zapryagayeva, D.A. Romanov, and I.S. Sveshnikova (0). Edited by A.S. Dubovik (0). Moskva, Nedra, 1982, 612 p.

951. Primeneniye lazerov v atomnoy, molekulyarnoy i yadernoy fizike. II Vsesoyuznaya shkola, Vil'nyus, 29 iyunya - 7 iyulya 1981. Trudy (Application of lasers in atomic, molecular and nuclear physics. Second All-Union School, Vilnius, 29 June - 7 July 1981. Proceedings). Board of rectors: Ye.P. Velikhov, I.P. Kubilyus, Yu.K. Vishchakas (0), V.S. Letokhov (72), and A.S. Piskarskas (49). Organizational committee: I.P. Kubilyus (0), S.A. Akhmanov (2), Yu.K. Vishchakas (0), Yu.K. Vaytkus, I.K. Grigonis, M.V. Ignatavichyus (49), V.I. Kabelka (506), A.A. Karpavichyus (0), E.K. Maldutis (506), V.D. Novikov (0), Z.B. Rudzikas (506), A.V. Trapulenis (49), O.A. Tumanov (72), and I.B. Yankina (2). Institut spektroskopii AN SSSR (72). Moskva, Nauka, 1983, 320 p.

952. Rasprostraneniye lazernogo izlucheniya v pogloshchayushchey svet srede (Propagation of laser radiation in a light-absorbing medium). Institut optiki atmosfery Tomskogo filiala SOAN (78). Sbornik nauchnykh trudov. Tomsk, 1982, 90 p. (RZhF, 5/83, 5D1205)

953. Schlett, Z., I. Hoffman, and A. Campeanu (NS). Semiconductoare si aplicatii (Semiconductors and their application). (In Romanian). Timisoara, Facla, 1981, 276 p. (RZhF, 6/83, 6Ye1239)

954. VI Simpozium po molekulyarnov spektroskopii vysokogo i sverkhvysokogo razresheniya, Tomsk, sentyabrya 1982. Tezisy dokladov (Sixth Symposium on High- and Ultrahigh-Resolution Molecular Spectroscopy, Tomsk, September 1982. Summaries of the reports). Edited by O.N. Ulenikov (O). Tomsk, 1982. Part 1, 246 p. Part 2, 243 p. (RZhF, 6/83, 6D383,384)

955. Spravochnik tekhnologa-optika (Handbook for the optical technician). Authors listed on inside page: I.Ya. Bubis, V.A. Veydenbakh, I.I. Dukhopel, V.G. Zubakov, S.S. Kachkin, S.M. Kuznetsov, Yu.V. Lisitsyn, M.A. Okatov, G.T. Petrovskiy, G.D. Pridatko, L.V. Sergeyev, V.I. Smirnov, N.V. Suvkovskaya, I.D. Torbin, and B.A. Chunin (O). Edited by S.M. Kuznetsov and M.A. Okatov (O). Leningrad, Mashinostroyeniye, 1983, 414 p.

956. Svechnikov, S.V., and G.S. Svechnikov (O). Volokonno-opticheskaya svyaz'. Uroven' razvitiya i perspektivy (Fiberoptic communications. Level of development and prospects). Seriya VIII. V laboratoriyakh uchenykh (In scientists' laboratories). Znaniye UkrSSR, no. 7. Kivev, 1982, 49 p. (KL, 19/83, 16444)

957. Termodinamika i poluprovodnikovoye materialovedeniye. II Vsesoyuznaya konferentsiya, fevral' 1983. Tezisy dokladov (Thermodynamics and semiconductor materials science. Second All-Union Conference, February 1983. Summaries of the reports). Moskovskiy institut elektronnoy tekhniki (119). Moskva, 1983, 327 p. (RZhF, 6/83, 6Ye1)

958. Viktorova, A.A., A.P. Savikin, and V.B. Tsaregradskiy (94). Lazery na krasitelyakh (Dye lasers). Gor'kovskiy GU. 1982, 54 p. (KL, 19/83, 16445)

959. XII Vsesovuznaya konferentsiya po elektronnoy mikroskopii, Sumy, oktyabr' 1982. Tezisy dokladov (12th All-Union Conference on Electron Microscopy, Sumy, October 1982. Summaries of the reports). Edited by N.A. Kiselev (O). Moskva, Nauka, 1982, 352 p. (RZhF, 5/83, 5Zh569)

960. Vsesoyuznaya konferentsiya po fizike poluprovodnikov, Baku, 12-14 oktyabrya 1982. Tom 2. Original'nyye soobshcheniya (All-Union Conference on Semiconductor Physics, Baku, 12-14 Oct 1982. Vol. 2. Original communications). Baku, Elm, 1982, 316 p. (RZhF, 6/83, 6Ye1237)

961. II Vsesoyuznava konferentsiya po inzhenernym problemam termoyadernykh reaktorov, Leningrad, 23-25 iyunya 1981. Doklady (Second All-Union Conference on Engineering Problems of Thermonuclear Reactors, Leningrad, 23-25 June 1981. Reports). Edited by B.N. Zhukov (O). Leningrad, 1982, Vol. 2, 318 p. Vol. 3, 446 p. Vol. 4, 433 p. (RZhF, 6/83, 6G2,3,4)

962. XI Vsesoyuznaya konferentsiya po kogerentnoy i nelineynoy optike, Yerevan, 22-25 noyabrya 1982. Tezisy dokladov. Chast' 1. Sektsii 1-5 (11th All-Union Conference on Coherent and Nonlinear Optics, Yerevan, 22-25 Nov 1982. Summaries of the reports. Part 1. Sections 1-5). Yerevan, 1982, 435 p. (RZhF, 5/83, 5D976)

963. VII Vsesoyuznaya konferentsiya po teplofizicheskim svoystvam veshchestv, Tashkent, 17-19 noyabrya 1982. Tezisy osnovykh dokladov (Seventh All-Union Conference on Thermophysical Properties of Matter, Tashkent, 17-19 Nov 1982. Summaries of the basic reports). Tashkent, Fan, 1982, 295 p. (RZhF, 6/83, 6Ye349)

964. IV Vsesoyuznaya konferentsiya "Troynyye poluprovodniki i ikh primeneniye", 6-8 yunya 1983. Tezisy dokladov (Fourth All-Union Conference on Ternary Semiconductors and Their Application, 6-8 June 1983. Summaries of the reports). Edited by S.I. Radautsan (44). Kishinev, 1983, 312 p.

965. VII Vsesoyuznyy simpozium po lazernomu i akusticheskomu zondirovaniyu atmosfery. Tezisy dokladov. Chast' 1 (Seventh All-Union Symposium on Laser and Acoustic Probing of the Atmosphere. Summaries of the reports. Part 1). Institut optiki atmosfery SOAN (78). Tomsk, 1982, 290 p. (RZhF, 5/83, 5D957)

966. Vzaimodeystviye teplovogo izlucheniya s veshchestvom (Interaction of thermal radiation with matter). Institut teplofiziki SOAN. Sbornik nauchnykh trudov. Edited by N.A. Rubtsov (159). Novosibirsk, 1982, 101 p. (KL, 19/83, 16290)

967. Zhiglinskiy, A.G., and V.V. Kuchinskiy (0). Real'nyy interferometr Fabri-Pero (Practical Fabry-Perot interferometers). Leningrad, Mashinostroyeniye, 1983, 176 p. (RZhF, 5/83, 5D718)

IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APP	(APTLB)	Acta physica polonica
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
CCF	(CKCFA)	Deskoslovenskiy casopis pro fyziku
CJP	(CZYPA)	Czechoslovak Journal of Physics
DAN	(DANKA)	Akademiya nauk SSSR. Doklady
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DNR	(DERUB)	Deponirovannyye nauchnyye raboty
EOM	(EOBMA)	Elektronnaya obrabotka materialov
ETP	(EXPRA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotki materialov
FiKhS	(FKSTD)	Fizika i khimiya stekla
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akadeniya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	(VBSFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
	(VABFA)	Seriya fiziko-tekhnicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Lat	(LZFTA)	Akademiya nauk Latviyskiy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk
IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nayk
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUVA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchevnykh zavedeniy. Priborostroyeniye
IVUZ Radioelek	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
JMO	(JMKOA)	Jemna mechanika a optika

KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLD	(-----)	Knizhnaya letopis'. Dopolnitel'nyy vypusk. Avtoreferaty dissertatsii
Kristal	(KRISA)	Kristallografiya
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MiTOM	(MTOMA)	Metallovedeniye i termicheskaya obrabotka materialov
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya prommyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, isobreteniya, promyshlennyye obraztsy, tovarnyye znaki
Poverkh	(-----)	Poverkhnost'. Fizika, khimiya, mekhanika
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research (B). Basic Research
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhR	(RARAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	sbornik	Plasma i neustoychivosti v poluprovodnikakh. Simpozium, Vil'nyus, 15-17 Nov 83. Tezisy dokladov. Institut fiziki poluprovodnikov AN Lit SSR. Vil'nyus, 1983.
Sb2		Vsesoyuznaya konferentsiya "Troynyye poluprovodniki i ikh primeneniye." 4th. 6-8 June 1983. Tezisy dokladov. Kishinev, 1983.
Sb3		International Conference and School: Lasers and Applications, Bucharest, 30 Aug - 11 Sep 1982. Vol. 2. Contributed papers. Abstracts. Bucharest, year of publication not given.
Sb4		Ceskoslovenska laserova a merici technika. Brno. Dum techniky CSVTS. Brno, 1980.
Sb5		Fotoprotsessy v gazovov faze. Leningradskiy GU. Mezhvedovstvennyy sbornik. Series: Uspekhi fotoniki, no. 8, 1983.
Sb6		Vsesoyuznaya konferentsiya po inzhenernym problemam termoyadernykh reaktorov. 2nd. Leningrad, 23-25 June 1981. Dokladv. Vol. 3. Leningrad, 1982.

Sb7 Kolloquium Interfernzchichtsysteme. 3rd. Lindrow Mark, 22-26 March 1982. Potsdammer Forschungen, v. B, no. 31, 1982.

Sb8 Tekhnika elektrodinamiki sverkhvysokikh chastot. Saratov, 1982.

Sb9 Rasprostraneniye lazernogo izlucheniya v pogloshcha-yushchey svet srede. Institut optiki atmosfery Tomskogo filiala SOAN. Sbornik nauchnykh trudov. Tomsk, 1982.

Sb10 Obrabotka radiosignalov akustoelektronnymi i akusto-opticheskimi ustroystvami. Leningrad, Nauka, 1983.

Sb11 Matematicheskiye metody teorii energoperenosa v neravnovesnykh i neodnorodnykh sredakh. Minsk, 1982.

Sb12 Fizicheskaya elektronika, no. 24, L'vov, 1982.

Sb13 Radiotekhnika, no. 66, Khar'kov, 1983.

Sb14 Dialektika v naukakh o prirode i cheloveke. Vsesoyuznoye soveshchaniye po filosoficheskikh voprosov sovremennogo yestestvoznaniya. 3rd. Moskva, 22-24 Apr 1981, Trudy. Vol. 1. Moskva, 1983.

Sb15 Konferentsiya molodykh uchenykh Fiziko-mekhanicheskogo instituta AN Ukr SSR. 10th. Sektsiya otbora i peredachi informatsii, L'vov, 12-16 Oct. 81. Materialy. Deposit at VINITI, no. 1077-83, 1 Mar 1983.

Sb16 Integral'naya optika, volokonnaya optika i golografiya. Mezhdunarodnaya shkola po kogerentnoy optike i golografii. 2nd. Varna, 28 Sep - 3 Oct 81. Materialy. Sofiya, BAN, 1982.

Sb17 Nauchnaya konferentsiya fakul'teta fizicheskoy i kvantovoy elektroniki Moskovskogo fiziko-tekhnicheskogo instituta. 7th, Dolgoprudnyy, 10 Apr 1982. Materialy. Deposit at VINITI, no. 1301-83, 11 Mar 83.

Sb18 Polucheniye i analiz chistykh veshchestv. Gor'kiy, 1982.

Sb19 Spektroskopiya atmosfernykh gazov. Novosibirsk, 1982.

Sb20 Vsesoyuznyy simpozium po lazernomu i akusticheskomu zondirovaniyu atmosfery. 7th. Tezisy dokladov. Part 1. Institut optiki atmosfery SOAN. Tomsk, 1982.

Sb21 Vsesoyuznyy simpozium po lasernomu i akusticheskomu zondirovaniyu atmosfery. 7th. Tezisy dokladov. Part 2. Institut optiki atmosfery SOAN. Tomsk, 1982.

Sb22 Optika okeana. Vol. 2. Prikladnaya optika okeana. Institut okeanologii AN SSSR. Moskva, Nauka, 1983.

Sb23 Optika okeana, Vol. 1. Fizicheskaya optika okeana. Institut okeanologii AN SSSR. Moskva, Nauka, 1983.

Sb24 Primeneniye lazerov v atomnoy, molekulyarnoy i yadernoy fizike. Vsesoyuznaya shkola. 2nd. Vil'nyus, 29 June - 7 July 1981. Trudy. Moskva, Nauka, 1983.

Sb25		Opticheskava golografiva. Vol. 2. Moskva, 1982.
Sb26		Neserebryannyye fotograficheskiye materialy i magnitnyye lenty. Moskva, 1982.
Sb27		Izmeritel'nyye ustroystva sistem energeticheskov fotometrii. VNII Fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Sbornik nauchnykh trudov. Moskva, 1982.
Sb28		Ellipsometriya - metod issledovaniya poverkhnosti. Institut fiziki poluprovodnikov SOAN. Novosibirsk, Nauka. 1983.
Sb29		Evolyutsionyye zadachi energoperenosa v neodnorodnykh sredakh. Minsk, 1982.
Sb30		Radioastronomicheskiye apparatura, antenny i metody. Vsesoyuznaya radioastronomicheskaya konferentsiya. 14th. Yerevan, 28-30 Oct 1982. Tezisy dokladov. Yerevan, 1982.
Sb31		Elektronnyye yavleniya v tverdykh telakh i gazakh. Azerbaydzhanskiy GU. Tematicheskiy sbornik nauchnykh trudov. Baku, 1982.
Sb32		Fizika ferritov. Elektricheskiye i magnitnyye yavleniya. Kuybyshevskiy GU. Tematicheskiy sbornik nauchnykh trudov. Kuybyshev, 1982.
Sb33		Ustroystva, elementy i metody kompleksnoy mikrominiatyurizatsii REA. Kazan', 1982.
SCF	(SCEFA)	Studii si cercetari de fizica
Tr1	trudy	Fizicheskiy institut AN SSSR. Trudy, no. 141, 1983.
Tr2		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 327, 1983.
Tr3		VNII monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv. Sbornik nauchnykh trudov, no. 9, 1982.
Tr4		Moskovskiy energeticheskiy institut. Trudy, no. 589, 1982.
Tr5		Arkticheskiy i antarkticheskiy NII. Trudy, no. 379, 1983.
Tr6		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 303, 1982.
TVT	(TVYTA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskoy khimii
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VBU	(VBMFA)	Belorusskiy universitet. Vestnik. Seriya 1. Matematika, fizika, mekhanika
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhAKh	(ZAKHA)	Zhurnal analiticheskoy khimii

ZhETF	(ZETFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETFP	(ZEPFA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZFKh	(ZFKHA)	Zhurnal fizicheskoy khimii
ZhNKh	(ZNOKA)	Zhurnal neorganicheskoy khimii
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTFP	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki
ZhVMMF	(ZVMFA)	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki
ZL	(ZVDLA)	Zavodskaya laboratoriya

V. AUTHOR AFFILIATIONS

NS. Non-Soviet
0. Affiliation not given
1. Physics Institute imeni Lebedev, AN SSSR, Moscow (Fizicheskiy institut imeni Lebedeva AN SSSR).
2. Moscow State University (Moskovskiy gosudarstvennvy universitet).
3. Institute of Physics, AN BSSR, Minsk (Institut fiziki AN BSSR).
4. Physicotechnical Institute im Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut im Ioffe AN SSSR).
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 Sibirskogo otdeleniya AN SSSR).
11. Kazan' State University (Kazanskiy GU).
12. Leningrad State University (Leningradskiy GU).
13. Institute of Crystallography, AN SSSR, Moscow (institut kristalografii AN SSSR).
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 Problems of Mechanics, AN SSSR, Moscow (Institut problem mekhaniki AN SSSR).
18. Institute of General and Inorganic Chemistry im Kurnakov, AN SSSR, Moscow (Institut obshchey i neorganicheskoy khimii im Kurnakova 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 vysshcye tekhnicheskoye uchilishche im Baumana).
29. Leningrad Polytechnic Institute (Leningradskiy politekhnicheskiy institut).
30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki).
33. Institute of Silicate Chemistry im Grebanshchikov, AN SSSR, Leningrad (Institut khimii silikatov im Grebanshchikova AN SSSR).
34. Khar'kov State University (Khar'kovskiy GU).
37. Yerevan State University (Yerevanskiy GU).
38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tekhnicheskiy institut).
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).
45. Saratov State University (Saratovskiy GU).
49. Vilnius State University (Vil'nyusskiy GU).
50. Institute of Semiconductor Physics, AN LitSSR, Vilnius (Institut fiziki poluprovodnikov AN LitSSR).
51. Kiev State University (Kiyevskiy GU).

52. Joint Institute of Nuclear Research, Dubna (Ob"yedinennyy institut yadernykh issledovaniy).
59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issledovaniy).
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).
66. Institute of Solid State Physics, AN SSSR (Institut fiziki tverdogo tela AN SSSR).
67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR).
69. Institute of Oceanography, AN SSSR (Institut okeanologii AN SSSR).
71. Institute of Applied Mathematics, AN SSSR (Institut prikladnoy matematiki AN SSSR).
72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii AN SSSR).
73. Institute of Theoretical Physics Im Landau, AN SSSR (Institut teoreticheskoy fiziki im Landau 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).
77. Institute of Inorganic Chemistry, Siberian Branch, AN SSSR (Institut neorganicheskoy khimii 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).
81. Physicomechanical Institute, AN UkrSSR (Fiziko-mekhanicheskiy institut AN UKrSSR).
85. Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR).
86. Azerbaydzhan State University (Azerbaydzhanskiy GU).
87. Belorussian State University (Belorusskiy GU).
90. Electrotechnical Institute of Communications (Elektrotekhnicheskiy institut svyazi).
94. Gor'kiy State University (Gor'kovskiy GU).
98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom GU).
104. Kaunas Polytechnic Institute (Kaunasskiy politekhnicheskiy institut).
109. Latvian State University (Latviyskiy GU).
110. Leningrad Electrotechnical Institute (Leningradskiy elektrotekhnicheskiy institut).
113. Leningrad Mechanical Institute (Leningradskiy mekhanicheskiy institut).
115. L'vov Polytechnic Institute (L'vovskiy politekhnicheskiy institut).
116. Moscow Aviation Institute (Moskovskiy aviatsionnyy institut).
118. Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut).
119. Moscow Institute of Electronic Engineering (Moskovskiy institut elektronnoy tekhniki).
122. Scientific Research Institute of Physicochemistry im Karpov (NI fiziko-khimicheskiy institut im Karpova).
132. Tomsk State University (Tomskiy 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 Optophysical Measurements (VNII optiko-fizicheskikh izmereniy).
151. Kishinev State University (Kishinevskiy GU).
159. Institute of Thermophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut teplofiziki SOAN).
161. Moscow Institute of Radio Engineering, Electronics and Automation (Moskovskiy institut radiotekhniki, elektroniki i avtomatiki).
162. Moscow State Pedagogical Institute (Moskovskiy gos pedagogicheskiy institut).
170. Moscow Machine Tool Institute (Moskovskiy stankoinstrumental'nyy institut).
175. Arctic and Antarctic Scientific Research Institute, Leningrad (Arkticheskiy i antarkticheskiy NII).
176. Moscow Geological Prospecting Institut im Ordzhonikidze (Moskovskiy geologorazvedochnyy institut im Ordzhonikidze).
179. Moscow Institute of Fine Chemical Technology im Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii im Lomonosova).
188. All Union Scientific Research Institute of Single Crystals, Scintillation Materials and Extra Pure Chemical Substances, Khar'kov (VNII monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv).
208. Tula Polytechnic Institute (Tul'skiy politekhnicheskiy institut).
210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).
216. Kazan' Aviation Institute (Kazanskiy aviatsionnyy institut).
219. Belorussian Polytechnic Institute, Minsk (Belorusskiy politekhnicheskiy institut).
225. Institute for Problems of Oncology, AN UkrSSR (Institut problem onkologii AN UkrSSR).
227. Tashkent State University (Tashkentskiy GU).
231. Scientific Research Institute of Motion Pictures and Photography (NI kinofotoinstitut)
240. Odessa State University (Odesskiy GU).
252. Leningrad Institute of Nuclear Physics, AN SSSR (Leningradskiy institut yadernoy fiziki AN SSSR).
254. Moscow Civil Engineering Institute (Moskovskiy inzhenerno-stroitel'skiy institut).
264. Institute of Radiophysics and Electronics, AN ArmSSR (Institut radiofiziki i elektroniki AN ArmSSR).
274. Donets Physicotechnical Institute, AN UkrSSR (Donetskiy fiziko-tekhnicheskiy institut AN UkrSSR).
279. Moscow Institute of the Petrochemical and Gas Industry im Gubkin (Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im Gubkina).
287. Institute of Physical Chemistry, AN SSSR (Institut fizicheskoy khimii AN SSSR).
295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimecheskoy kinetiki i goreniya SOAN).
298. Institute of Electrodynamics, AN UkrSSR (Institut elektrodinamiki AN UkrSSR).
299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
311. All Union Scientific Research Institute of Mineral Resources, Moscow (VNII mineral'nogo syr'ya).
313. Scientific Research Institute of Applied Physics at Irkutsk State University (NII prikladnoy fiziki pri Irkutskom GU).
317. Saratov Polytechnic Institute (Saratovskiy politekhnicheskiy institut).
318. Scientific Research Institute of Direct Current (NII postoyannogo toka).

321. Mogilev Branch of the Institute of Physics, AN BSSR (Mogilevskiy filial Instituta fiziki AN BSSR).
325. Scientific Research Institute of Physics, Rostov-on-Don (NII fiziki, Rostov-na-Donu).
334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom GU).
376. Kalinin State University (Kalininskiy GU).
381. Institute of Hygiene im Erisman (Institut gigiyeny im Erismana).
395. Scientific Research Institute of Introscopy (NII introskopii).
397. Smolensk Branch of the Moscow Power Engineering Institute (Smolenskiy filial Moskovskogo energeticheskogo instituta).
415. Kishinev Polytechnic Institute (Kishinevskiy politekhnicheskiy institut).
417. All Union Scientific Research Institute of Eye Diseases (VNII glaznykh bolezney).
426. Institute of Applied Physics, AN SSSR, Gor'kiy (Institut prikladnoy fiziki AN SSSR).
431. Institute of Applied Mechanics AN SSSR, Moscow (Institut prikladnoy mekhaniki AN SSSR).
435. Simferopol State University (Simferopol'skiy GU).
444. Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki AN KazSSR).
453. All Union Scientific Research Institute of Nuclear Geophysics and Geochemistry (VNII yadernoy geofiziki i geokhimii).
460. Chelyabinsk Polytechnic Institute (Chelyabinskiy politekhnicheskiy institut).
485. Institute of Nuclear research, AN SSSR, Moscow (Institut yadernykh issledovaniy AN SSSR).
486. Irkutsk State Pedagogical Institute (Irkutskiy gos pedagogicheskiy institut).
490. Institute of Physics, AN GruzSSR (Institut fiziki AN GruzSSR).
492. Institute of Physics, AN EstSSR (Institut fiziki AN EstSSR).
506. Institute of Physics, AN LitSSR (Institut fiziki AN LitSSR).
507. Institute of Solid State and Semiconductor Physics, AN BSSR, Minsk (Institut fiziki tverdogo tela i poluprovodnikov AN BSSR).
511. Institute of Applied Problems in Mechanics and Mathematics, AN UkrSSR, L'vov (Institut prikladnykh problem mekhaniki i matematiki AN UkrSSR).
558. All Union Scientific Research and Test Institute of Medical Technology, Moscow (VNI i ispytatel'nyy institut meditsinskoy tekhniki).
581. Zaporozh'ye Industrial Institut (Zaporozhskiy industrial'nyy institut).
587. Vitebsk Branch of the Institute of Solid State and Semiconductor Physics, AN BSSR (Vitebskoye otdeleniye Instituta fiziki tverdogo tela i poluprovodnikov AN BSSR).
596. Saratov State Medical Institute (Saratovskiy gos meditsinskiy institut).
610. All Union Central Scientific Research Institute of Labor Hygiene, Moscow (VTsNII okhrany truda).
614. Scientific Research Center for Industrial Lasers, AN SSSR, Troitsk (NI tsentr po tekhnologicheskim lazeram AN SSSR).
626. All Union Scientific Research Center for Studying the Properties of Surfaces and Vacuums, Moscow (VNI tsentr po izucheniyu svoystv poverkhnosti i vakuuma).
628. All Union Scientific Research Institute of the Cable Industry, Moscow (VNII kabel'noy promyshlennosti).

634. Institute of Chemistry and Chemical Engineering, Siberian Branch, AN SSSR (Institut khimii i khimicheskoy tekhnologii SOAN).
652. Institute of Electrochemistry, Ural Scientific Center, AN SSSR, Sverdlovsk (Institut elektrokhimii Ural'skogo nauchnogo tsentra AN SSSR).
705. Rostov-on-Don Institute of Farm Machinery (Rostovskiy-na-Donu institut sel'skokhozyaystvennogo mashinostroyeniya).
710. Institute of Radioelectronics, AN BSSR (Institut radioelektroniki AN BSSR).
726. Komsomol'sk-on-Amur Polytechnic Institute (Komsomol'skiy-na-Amure politekhnicheskiy institut).
735. Timiryazev Agricultural Academy (Timiryazevskaya sel'skokhozyaystvennaya akademiya).
740. Moscow Scientific Research of Eye Diseases im Gel'mgol'ts (Moskovskiy NII glaznykh bolezney im Gel'mgol'tsa).
741. Tselinograd Medical Institute (Tselinogradskiy meditsinskiy institut).
743. Leningrad Scientific Research Institute of Labor Hygiene and Occupational Diseases (Leningradskiy NII gigiyeny truda i profzabolevaniy).
744. Tiraspol' Pedagogical Institute (Tiraspol'skiy pedagogicheskiy institut).
746. All Union Scientific Research Institute of Electrical Insulating Materials and Foil Coated Dielectrics (VNII elektroizolyatsionnykh materialov i fol'girovannykh dielektrikov).

VI. AUTHOR INDEX

END

FILMED

10-84

DTIC