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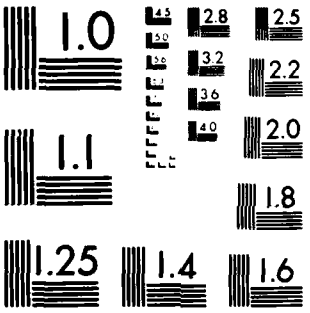

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REPORT DOCUMENTATION PAGE

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1. REPORT NUMBER: DST-2700Z-004-83

2. GOVT ACCESSION NO.: AD-A129467

3. RECIPIENT'S CATALOG NUMBER:

4. TITLE (and Subtitle): BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, No. 58 MARCH - APRIL 1982

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, ATTN: DT-1A

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS:

11. CONTROLLING OFFICE NAME AND ADDRESS:

12. REPORT DATE: April 22, 1983

13. NUMBER OF PAGES: 138

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office):

15. SECURITY CLASS. (of this report):

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, Laser Theory, Laser Biological Effects, Laser Communications, Laser Beam Propagation, 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 March-April 1982, and is No. 58 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; 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.

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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 March-April 1982, 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 the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Kvapil, J., B. Perner, J. Kubelka, and Jos. Kvapil (NS). The role of iron ions in a laser ruby. Crystal Research and Technology [GDR], no. 10, 1981, 1159-1164. (RZhF, 4/82, 4D1240)

2. Crystal: Rare-Earth Activated

a. Nd^{3+}

2. Afon'kina, S.S., D.G. Kalinin, V.L. Naumov, A.M. Onishchenko, V.A. Pashkov, and V.L. Farshtendiker (0). Electrooptic lithium niobate switches for Nd:YAG lasers. Sb 1, 28-30. (TVKE, 30/82, 607)

3. Akmanov, A.G., and A.M. Val'shin (586). Multifrequency laser radiation source. PTE, no. 2, 1982, 168-169.

4. Akmanov, A.G., and A.M. Val'shin (586). Time characteristics of radiation pulses from a YAG:Nd^{3+} laser lasing at the $^4F_{3/2} \rightarrow {}^4I_{13/2}$ transition. KE, no. 4, 1982, 847-848.

5. Antsiferov, V.V., and Yu.D. Golyayev (0). Experimental study on the dynamics of free lasing in a pulsed neodymium garnet laser. OiS, v. 52, no. 4, 1982, 706-712.

6. Avanesov, A.G., V.I. Denker, V.V. Osiko, S.S. Pirumov, V.P. Sakun, V.A. Smirnov, and I.A. Shcherbakov (1). Kinetics of radiationless relaxation from an upper laser level of neodymium in a $Y_3Al_5O_{12}$ crystal. Fizicheskiy institut AN SSSR. Preprint, no. 185, 1981, 15 p. (RZhF, 3/82, 3D1235)

7. Avanesov, A.G., B.I. Denker, V.V. Osiko, V.G. Ostroumov, V.P. Sakun, V.A. Smirnov, and I.A. Shcherbakov (1). Sensitization of radiation and its application to increasing the efficiency of solid state laser active media. KE, no. 4, 1982, 681-688.

8. Basiyev, T.T., Yu.K. Voron'ko, S.B. Mirov, V.V. Osiko, and A.M. Prokhorov (1). Efficient passive Q-switching in neodymium lasers based on $LiF:F_2^-$ crystals. KE, no. 4, 1982, 837-839.

9. Briskina, Ch.M., Ye.V. Vasil'yev, A.A. Yevdokimov, V.M. Markushev, V.A. Murashov, A.M. Frolov, and V.I. Tsaryuk (161). Production and luminescence properties of neodymium-doped $LaNb_5O_{14}$ crystals. NM, no. 4, 1982, 660 663.

10. Dmitriyev, V.G., M.F. Stel'makh, and O.B. Cherednichenko (0). Solid state YAG lasers with frequency conversion. Sb 1, 19-28. (TVKE, 30/82, 604)

11. Fedorov, N.F., I.F. Andreyev, and I.L. Lukashov (213). Selected properties of oxygermanate apatite single crystals. Kristal, no. 2, 1982 384.

12. Gulevich, V.M., A.A. Ilyukhin, V.A. Maslyankin, and A.V. Shelobolin (1). Contrast of neodymium laser radiation using wavefront reversal during stimulated Brillouin scattering. KE, no. 3, 1982, 537-541.

13. Khandokhin, P.A., and Ya.I. Khanin (426). Effect of lasing frequency shift and resonator decoupling on the relaxation frequency spectrum of a solid state ring laser. KE, no. 3, 1982, 637-638.

14. Lutz, F., Ye.I. Sidorova, Yu.P. Timofeyev, G. Huber, and I.A. Shcherbakov (1). Measuring the absolute quantum yield for luminescence from the upper lasing level of Nd^{3+} in NdP_5O_{14} crystal. KE, no. 3, 1982, 612-613.

15. Zharikov, Ye.V., N.N. Il'ichev, V.V. Laptev, A.A. Malyutin, V.G. Ostroumov, P.P. Pashinin, and I.A. Shcherbakov (1). Sensitization of luminescence from neodymium ions by chromium ions in a $Gd_3Ga_5O_{12}$ crystal. KE, no. 3, 1982, 568-573.

16. Zverev, G.M., Yu.G. D'yakova, and A.A. Shokin (0). Solid state YAG:Nd lasers for the national economy. Sb 1, 15-19. (TVKE, 30/82, 605)

b. Er^{3+}

17. Andriasyan, M.A., N.V. Vardanyan, and R.B. Kostanyan (59). Millisecond $Lu_3Al_5O_{12}$:Er laser. KE, no. 3, 1982, 604-605.

3. Crystal: Miscellaneous

4. Semiconductor

a. CdS

18. Abduyev, A.Kh., A.D. Adukov, B.M. Atayev, and M.S. Buttayev (534). Lasing in epitaxial layers of cadmium sulfide. KE, no. 4, 1982, 830-832.

19. Kozlovskiy, V.I., R.F. Nabiyev, I.A. Poluektov, and Yu.M. Popov (1). Effect of electron-phonon interaction on the processes of absorption and stimulated emission in CdS. KE, no. 4, 1982, 806-810.

b. PbTe

20. Danishevskiy, A.M. (4). Lead telluride laser with two-photon pumping. ZhTF, no. 4, 1982, 785-787.

c. $Pb_{1-x}Sn_xTe$

21. Baranova, N.N., M.V. Bestayev, L.V. Veydenbakh, A.L. Kurbatov, P.D. Polchkova, and M.V. Shubin (0). $Pb_{1-x}Sn_xTe$ laser diode with a planar structure. ZhTF, no. 4, 1982, 781-782.

22. Herrmann, K., P. Rudolph, C. Albers, H. Berger, W. Bremser, A. Engel, F. Galeski, A. Jalyschko, M. Muehlberg, H. Niebsch, P. Schaefer, and M. Zahn (NS). Properties of injection lasers based on $Pb_{1-x}Sn_xTe$. Sb 2, 107-118. (RZhF, 3/82, 3D1273)

23. Vyatkin, K.V., and A.P. Shotov (1). Refractive index for $Pb_{1-x}Sn_xTe$ (x=0-0.05). KSpF, no. 4, 1982, 42-46.

d. Miscellaneous Heterojunction

24. Aarik, Ya., Ya. Bergmann, A. Virro, P. Lyuk V. Sammelsel'g, and Ya. Fridental (0). C-w lasing in $Al_xGa_{1-x}Sb$-GaSb heterolasers. IAN Est, no. 4, 1981, 395-396. (RZhF, 4/82, 4D1257)

25. Agayev V.V., D.Z. Garbuzov, K.A. Gatsoyev, A.T. Gorelenok, A.G. Dzigasov, M.K. Trukan, and V.P. Chalyy (4). Efficiency of radiative transitions in InGaAsP-InP double heterostructures doped with Zn. ZhTF P, no. 5, 1982, 267-271.

26. Nakwaski, W. (Pole). Threshold current for strip laser diodes with oxide insulation. KE, no. 3, 1982. 583-586.

e. Theory

27. Levit, B.I., and B.N. Tumanov (0). Autodyne effect in injection semiconductor lasers. Sb 3, 90-99. (RZhRadiot, 4/82, 4Ye104)

28. Skopin, I.A. (1). Effect of nonlinear losses in the active region of an injection laser on the self-modulation zone for fluctuations in radiation intensity. KSpF, no. 3, 1982, 57-64.

29. Zibrov, A.S., A.M. Akul'shin, V.L. Velichanskiy, V.I. Marakhova, V.V. Nikitin, V.A. Sautenkov, D.A. Tyurikov, and Ye.K. Yurkin (1). Frequency stabilization in an injection laser with an external resonator. KE, no. 4, 1982, 804-806.

5. Glass: Nd

30. Alekseyeva, V.A., and S.I. Khankov (0). Maximum rep rate for a neodymium phosphate glass laser. ZhPS, v. 36, no. 4, 1982, 568-574.

31. Buzhinskiy, I.M., S.F. Geychenko, Ye.I. Koryagina, and V.F. Surkova (7). Effect of water in silicate laser glasses on their characteristics. OMP, no. 4, 1982, 58-59.

32. Chlodzinski, J., A. Dubik, J. Firak, J. Marczak, J. Owsik, Z. Patron, A. Rycyk, and M. Szczurek (NS). Study on the spatial filter in a high-power Nd-glass laser system. JTP, no. 2, 1981, 131-141. (RZhRadiot, 4/82, 4Ye93)

33. Danil'chuk, N.V., and V.N. Shapovalov (0). Spectral-energy characteristics of free lasing from neodymium glass at high temperatures. ZhPS, v. 36, no. 4, 1982, 599-603.

34. Gureyev, D.M., V.A. Yevstratov, V.A. Katulin, V.D. Nikolayev, A.L. Petrov, and Yu.A. Yaldin (627). Equalizing the cross sectional distribution of energy density in the beam of a commercial solid-state laser. KE, no. 4, 1982, 815-817.

35. Vishchakas, Yu., V. Gul'binas, V. Kabelka, and V. Syrus (506). High-efficiency picosecond concentrated neodymium phosphate glass laser. ZhTF P, no. 8, 1982, 465-468.

6. Glass: Miscellaneous

36. Alekseyev, N.Ye., A.K. Gromov, A.A. Izyneyev, and V.B. Kravchenko (15). New phosphate glass for lasers with a high rep rate. KE, no. 3, 1982, 622-624.

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

37. Al'tshuler, G.B., Ye.G. Dul'neva, I.K. Meshkovskiy, and K.I. Krylov (0). Solid-state active medium based on dyes. ZhPS, v. 36, no. 4, 1982, 592-599.

38. Dyatlov, V.K., M.K. Dyatlov, and O.N. Oreshak (0). The 6Zh LZhN-401 c-w rhodamine tunable jet laser. Sb 1, 89. (TVKE, 30/82, 562)

39. Il'ichev, N.N., A.A. Malyutin, P.P. Pashinin, S.F. Raspopov, and A.T. Sukhodol'skiy (1). Simple distributed-feedback dye laser with a lasing line width of 0.01 cm^{-1}. ZhTF P, no. 8, 1982, 460-462.

40. Levshin, L.V., A.V. Naumov, A.M. Saletskiy, and V.I. Yuzhakov (2). Effect of inhomogeneous broadening of levels on triplet-triplet absorption in rhodamine 6G solutions during lasing. DAN SSSR, v. 236, no. 5, 1982, 1161-1164.

b. Miscellaneous Dyes

41. Alekseyev, V.A., T.I. Mikhalina, V.G. Nikiforov, and A.I. Sopin (0). Study on a flashlamp-pumped dye laser with rep rates to 50 Hz. ZhPS, v. 36, no. 4, 1982, 674-676.

42. Asimov, M.M., V.N. Gavrilenko, and A.N. Rubinov (0). Spectroscopic parameters of the triplet state for a variety of laser dyes in various solutions. ZhPS, v. 36, no. 4, 1982, 583-587.

43. Dyatlov, M.K., A.V. Kurbatov, and O.N. Oreshak (0). The LZhI-503 tunable pulsed dye laser. PSU, no. 3, 1982, 35.

44. Dyatlov, V.K., M.K. Dyatlov, Yu.N. Kulikov, V.F. Moskalenko, and O.N. Oreshak (0). Effect of the polarization of the pumping laser radiation on the lasing power of an organic compound laser. Sb 1, 106-108. (TVKE, 30/82, 556)

45. Gondra, A.D., and V.Ye. Mnuskin (0). Calculation of the lasing from a pulsed dye laser with laser pumping. ZhPS, v. 36, no. 4, 1982, 577-582.

46. Volyak, K.I., G.A. Lyakhov, Yu.P. Svirko, and A.V. Egibyan (1). Analyzing the lasing parameters of a dye laser in a nematic matrix. Fizicheskiy institut AN SSSR. Preprint, no. 209, 1981, 24 p. (RZhF, 3/82, 3D1219)

47. Zhil'tsov, V.I., B.A. Konstantinov, N.A. Kozlov, V.Ye. Mnuskin, S.F. Samonov, and V.A. Fedorov (0). The LZhI-502 tunable organic dye laser. PTE, no. 2, 1982, 225.

2. Inorganic Liquids

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

48. Abramov, V.Ya., M.M. Grechishchev, and V.D. Medvedev (0). The LG-72 and LG-72-1 He-Ne gas laser. Sb 1, 89. (TVKE, 30/82, 424)

49. Abramov, V.Ya., M.M. Grechishchev, and V.D. Medvedev (0). The LG-72 (LG-72-1) He-Ne gas laser. PTE, no. 2, 1982, 224.

50. Borisovskiy, S.P., Ye.G. Chulyayeva, and Yu.M. Yakovlev (0). The LG-77 and LG-149-1 single-frequency gas laser. PTE, no. 2, 1982, 224.

51. Chetverikov, V.I. (0). Suppression of beat frequency fluctuations in a self-mode locked triple-mode laser. OiS, v. 52, no. 4, 1982, 733-735.

52. Fofanov, Ya.A. (12). Study on conditions causing wave perturbations in the active elements of He-Ne lasers. Leningradskiy GU. Dissertation, 1980, 15 p. (KLDVAD, 3/82, 3615)

53. Godzinski, Z., K. Abramski, and E. Matras (NS). Superstable lasers using saturation absorption. He-Ne/CH_4 lasers. Elektronika [Poland], no. 6, 1981, 16-19,47-48. (RZhF, 4/82, 4D1272)

54. Godzinski, Z., E. Matras, and K. Abramski (NS). Superstable lasers with repetition rate stabilized by saturation absorption. He-Ne/I_2 lasers. Elektronika [Poland], no. 7-8, 1981, 23-26. (RZhF, 4/82, 4D1270)

55. Gubin, M.A., G.I. Kozin, I.P. Konovalov, V.V. Nikitin, V.N. Petrovskiy, Ye.D. Protsenko, and A.N. Rurukin (1). Two-mode He-Ne/CH_4 lasers with controlled coupling between the modes. Fizicheskiy institut AN SSSR. Preprint, no. 148, 1981, 59 p. (RZhRadiot, 3/82, 3Ye71)

56. Gudelev, V.G., and V.M. Yasinskiy (0). Radiation gain distribution along an He-Ne gas-discharge positive column. Sb 4, 843-844. (RZhF, 3/82, 3G709)

57. Gudelev, V.G., A.I. Klochko, and V.M. Yasinskiy (3). Two-frequency He-Ne laser in mutually orthogonal transverse magnetic fields. Institut fiziki AN BSSR. Preprint, no. 254, 1981, 59 p. (TVKE, 30/82, 431)

58. Gudelev, V.G., and V.M. Yasinskiy (3). Longitudinal gain distribution in the active elements of He-Ne lasers. Institut fiziki AN BSSR. Preprint, no. 255, 1981, 59 p. (TVKE, 30/82, 700)

59. Kashnikov, N.G., V.A. Perebyakin, V.A. Stepanov, and G.S. Sedov (0). He-Ne lasers. Sb 1, 62-64. (TVKE, 30/82, 428)

60. Nayurov, A.Ya., V.A. Perebyakin, and Ye.G. Chulyayeva (0). Study on the frequency fluctuation spectrum for radiation from single-frequency stabilized lasers. Avtometriya, no. 2, 1982, 95-97.

b. He-Xe

61. Murav'yev, I.I., A.M. Shevnin, A.M. Yancharina, and G.S. Yevtushenko (396). Recombination laser based on a plasma jet of helium and xenon. KE, no. 4, 1982, 793-795.

c. He-Kr

62. Pramatarov, P., M. Stefanova, and Y. Pacheva (0). Population inversion of KrII laser lines in an He-Kr hollow cathode discharge. Sb 5, 449-450. (RZhF, 3/82, 3G710)

2. Molecular Beam and Ion

a. CO_2

63. Aleynikov, V.S., V.V. Karpetskiy, O.S. Lysogorov, L.D. Mamedli, and S.P. Fedulova (0). CO_2 lasers with a sealed-off active element. Sb 1, 70-71. (TVKE, 30/82, 463)

64. Aleynikov, V.S., V.V. Bibikova, O.S. Lysogorov, L.D. Mamedli, and P.I. Savilov (0). Compact CO_2 radiator based on a closed convective cooling cycle of the active mixture. Sb 1, 71-74. (TVKE, 30/82, 453)

65. Aleynikov, V.S., A.N. Anufriyev, A.Ye. Balanin, V.S. Belozerov, V.P. Belyayev, and Yu.V. Kulikov (0). Industrial laser module based on a periodic pulsed CO_2 radiator. Sb 1, 75-77. (TVKE, 30/82, 462)

66. Aleynikov, V.S., Yu.F. Bondarenko, L.I. Sanferova, and Yu.A. Tsygankov (0). Compact pulsed CO_2 radiator and prospects for its application. Sb 1, 77-82. (TVKE, 30/82, 454)

67. Apollonov, V.V., F.V. Bunkin, V.R. Sorochenko, K.N. Firsov, and Yu.A. Shakir (1). Numerical modeling of regenerative amplification of nanosecond pulses in a CO_2 laser. KE, no. 4, 1982, 832-835.

68. Basov, N.G., V.I. Kovalev, A.R. Lesiv, and F.S. Fayzullov (0). Study on wavefront reversal of pulsed CO_2 laser radiation during four-wave interaction in SF_6. ZhTF P, no. 8, 1982, 451-455.

69. Bertel', I.M., V.V. Churakov, V.O. Petukhov, B.I. Stepanov, and S.A. Trushin (0). Vibrational temperature kinetics in a TEA CO_2 laser. Sb 4, 823-824. (RZhF, 3/82, 3G705)

70. Gadiyak, G.V., and V.A. Shveygert (193). Spatial inhomogeneity of a volumetric steady-state self-terminating discharge. Fizika plazmy, no. 2, 1982, 410-414.

71. Golub, M.A., V.P. Degtyareva, A.N. Klimov, V.V. Popov, A.M. Prokhorov, Ye.V. Sisakyan, I.N. Sisakyan, and V.A. Soyfer (1). Machine synthesis of focusing elements for a CO_2 laser. ZhTF P, no. 8, 1982, 449-451.

72. Janulewicz, K., J. Kubicki, and Z. Szczepan (NS). Simple model of energy extraction in a TEA CO_2 multipass laser amplifier. JTP, no. 2, 1981, 143-152. (RZhRadiot, 4/82, 4Ye23)

73. Osipov, V.V., V.V. Savin, and V.A. Tel'nov (0). Characteristics of CO_2 laser media with a high pumping level. ZhPMTF, no. 2, 1982, 10-17.

74. Vuong Nguyen Tho, Z. Puzewicz, and M. Jazwinski (NS). Modified Lamberton-Pearson system for pumping a CO_2 TEA laser. BWAT, no. 9, 1981, 107-113. (RZhF, 4/82, 4D1218)

75. Vuong Nguyen Tho, and M. Jazwinski (NS). Pulsed CO_2 TEA laser stabilized by photopreionization by a glancing corona discharge at a dielectric surface. BWAT, no. 9, 1981, 115-127. (RZhF, 4/82, 4D1214)

76. Vuong Nguyen Tho, and Z. Puzewicz (Poland, Russ transliteration: Vyong Nguyen Tkho, Z. Puzevich). Pulsed TEA CO_2 laser with combined optical preionization and a high specific energy output. ZhTF, no. 4, 1982, 801-803.

77. Zubarev, N.N., I.N. Kal'vina, B.A. Kozlov, V.F. Moskalenko, and V.I. Pshenichnikov (0). CO_2 laser with a transverse discharge. Sb I, 69. (TVKE, 30/82, 461)

b. CO

78. Aleynikov, V.S., Ye.A. Dorozhkina, and V.I. Masychev (0). CO laser and prospects for its application. Sb I, 64-69. (TVKE, 30/82, 458)

79. Basiyev, A.G., V.Ye. Gal'tsev, V.A. Gurashvili, et al. (23). Spectral formation of a Q-switched CO laser. Institut atomnoy energii. Preprint, no. 3448/12, 1981, 32 p. (KL, 15/82, 12621)

80. Basov, N.G., V.S. Kazakevich, and I.B. Kovsh (1). Spectrum of radiation from a pulsed electroionization CO laser with selective and nonselective resonators. KE, no. 4, 1982, 763-771.

81. Basov, N.G., V.I. Dolinina, O.V. Zimina, V.S. Kazakevich, I.B. Kovsh, A.F. Suchkov, and B.M. Urin (1). Characteristics of the lasing spectrum from a high-pressure CO laser. KE, no. 4, 1982, 772-775.

82. Dubovskiy, P.Ye., E.N. Lotkova, L.Ya. Ostrovskaya, A.Ya. Payurov, N.N. Sobolev, V.V. Sokovikov, and N.P. Sukhanova (1). Sealed-off CO waveguide laser. KE, no. 4, 1982, 839-842.

83. Rubinov, Yu.A. (7). Research, development and application of high-pressure CO lasers with a self-sustained discharge. Gosudarstvennyy opticheskiy institut. Dissertation, 1981, 25 p. (KLDVAD, 4/82, 5286)

c. Noble Gas

84. Akhmedzhanov, R.A., I.N. Polushkin, Ya.I. Khanin, and V.V. Yazenkov (426). Measuring the concentration of excited atoms in a gas discharge in neon using laser resonant fluorescence. Fizika plazmy, no. 2 1982, 333-338.

85. Miljevic, V. (NS). Laser transitions in an argon plasma in crossed electric and magnetic fields. Sb 4, 861-862. (RZhF, 3/82, 3G707)

86. Redlich, L. (Russ transliteration: Redlikh, L.). Using a "KFP1" Fabry-Perot interferometer to study the discharge plasma of inert gas ion lasers. Iyenskoye obozreniye, no. 3, 1980, 127-129. (TVKE, 29/82, 408)

87. Vasilenko, L.S., V.G. Gol'dort, A.N. Goncharov, A.E. Om, and M.N. Skvortsov (159). Argon ion laser with a sharp lasing line. KE, no. 4, 1982, 812-814.

d. I_2

88. Zuyev, V.S., L.D. Mikheyev, and A.P. Shirokikh (1). Study on an I_2(D'-A') laser with broadband optical pumping. KE, no. 3, 1982, 573-582.

e. NH_3

89. Akhrarov, M., B.I. Vasil'yev, A.Z. Grasyuk, and A.B. Yastrebkov (1). Characteristics of a high-power NH_3-N_2 laser with passive longitudinal mode lock. KE, no. 4, 1982, 655-660.

f. Metal Vapor

90. Artem'yev, A.Yu., B.L. Borovich, L.A. Vasil'yev, V.Ye. Gerts, Ye.P. Nalegach, S.A. Negashev, Ye.G. Radostin, V.M. Ryazanskiy, L.V. Tatarintsev, and A.N. Ul'yanov (0). Multistage copper vapor laser. KE, no. 4, 1982, 738-743.

91. Dyatlov, M.K., V.G. Kas'yan, N.G. Kashnikov, V.F. Moskalenko, and V.A. Stepanov (0). He-Cd lasers. Sb 1, 60-62. (TVKE, 30/82, 426)

92. Dyatlov, M.K., and V.G. Kas'yan (0). The LGN-504 He-Cd laser. Sb 1, 92. (TVKE, 30/82, 427)

93. Kazakov, V.V., S.V. Markova, and G.G. Petrash (1). Decay of metastable levels in atomic bismuth during the period between pulses in a bismuth vapor laser. KE, no. 4, 1982, 688-694.

94. Sem, M.F. (1). Ion gas discharge lasers using chemical element vapors. Fizicheskiy institut AN SSSR. Dissertation, 1981, 37 p. (TVKE, 29/82, 401)

95. Vayner, V.V., I.G. Ivanov, and M.F. Sem (0). Electron energy distribution in a hollow cathode discharge and rare gas--metal vapor mixture excitation. Sb 4, 869-870. (RZhF, 3/82, 3G711)

96. Volkova, L.M., A.M. Devyatov, and V.Kh. Fazlayev (2). Mechanism for formation of strontium and barium ions in a discharge in a cooled hollow cathode. VMU, no. 2, 1982, 16-20.

97. Zinchenko, S.P., I.G. Ivanov, and M.F. Sem (325). Pulsed mercury vapor gas laser with a large diameter output beam. PTE, no. 2, 1982, 225.

g. Gasdynamic

98. Kovtun, V.V., S.S. Novikov, and I.B. Svetlichnyy (67). Chemical pumping of molecular vibrational levels in CO_2 reaction products from the recombination of CO+O+M under gasdynamic mixing conditions. DAN SSSR, v. 263, no. 2, 1982, 332-334.

99. Kovtun, V.V., S.S. Novikov, and I.B. Svetlichnyy (0). Chemical gasdynamic CO_2 laser using the reaction products from the recombination of CO+O+M. FGiV, no. 2, 1982, 88-96.

100. Kireyev, V.I., and S.N. Minin (23). Profiling of planar and axially symmetric supersonic jet nozzles for gasdynamic lasers. Institut atomnoy energii, no. 3453/16, 1981, 30 p. (RZhRadiot, 3/82, 3Ye96)

101. Vedeneyev, A.A., A.Yu. Volkov, A.I. Demin, Ye.M. Kudryavtsev (1), and J. Milewski (Pole, Russ transliteration: Ye. Milevskiy). Active material for a gasdynamic laser. Otkr izobr, no. 12, 1982, 762712.

102. Yefremov, N.M., and B.A. Tikhonov (0). Nonequilibrium flow of a two-phase flow in gasdynamic laser jet nozzles. Sb 6, 151-156.

3. Excimer

103. Vorob'yev, V.S., B.I. Grinchenko, A.L. Khomkin, and V.F. Chinnov (0). Relaxation kinetics of the plasma of high-pressure noble gases. Sb 5, 459-460. (RZhF, 3/82, 3G704)

4. Theory

104. Achasov, O.V., N.A. Fomin, R.I. Soloukhin, and S.A. Zhdanok (0). Plasma generation in supersonic flows of vibrationally nonequilibrium gases. Sb 4, 819-820. (RZhF, 3/82, 3G717)

105. Aleynikov, V.S., V.P. Belyayev, and Yu.V. Pechenin (0). Principle problems in developing efficient gas lasers for highly productive industrial equipment. Sb 1, 39-51. (TVKE, 30/82, 488)

106. Armichev, A.V., L.M. Breusova, N.K. Prokhorova, L.B. Rukevich, N.M. Sulzhenko, and T.B. Fogel'son (0). High-power sealed-off UV laser. Sb 1, 83-85. (TVKE, 30/82, 469)

107. Bystritskiy, V.M., and A.V. Petrov (336). Laser with transverse charged particle beam pumping. Otkr izobr, no. 14, 1982, 845722.

108. Danileyko, M.V., A.M. Tselinko, and L.P. Tatsenko (5). Anomalously large shifts in phase resonances of ring lasers. KE, no. 4, 1982, 844-846.

109. Dymshits, Yu.I., and V.G. Neverov (0). Primary composition of a plasma of working media employed in e-beam-pumped gas lasers. Sb 4, 835-836. (RZhF, 3/82, 3G706)

110. Galechyan, G.A. (521). Discharge contraction in a longitudinal gas flow caused by transition from a laminar to a turbulent flow. TVT, no. 2, 1982, 379 380.

111. Kravchenko, V.F. (41). Similarity discharges for pulsed gas lasers. Deposit at VINITI, no. 5534-81, 4 Dec 1981, 17 p. (DR, 3/82, 398)

112. Levdanskiy, V.V. (0). Laser-induced mass transfer of rarefied gases in capillaries. ZhTF, no. 4, 1982, 826-827.

113. Mazan'ko, I.P. (12). Study on the stability of steady-state operating conditions in gas lasers. Leningradskiy GU. Dissertation, 1980, 36 p. (KLDVAD, 3/82, 3503)

114. Popov, A.K., and V.M. Shalayev (210). Lasing at non-Doppler transitions in optically pumped lasers. KE, no. 3, 1982, 488-495.

115. Pustynskiy, L.N., S.R. Kholev, and G.V. Yakushin (0). Axial compression and threshold compression characteristics of a high-voltage glow discharge. TVT, no. 2, 1982, 207-214.

116. Starik, A.M. (0). Determining the relaxation time during kinetic cooling of a moving gas. ZhPMTF, no. 2, 1982, 17-22.

117. Stepanov, B.I., S.A. Trushin, and V.V. Churakov (0). Theoretical study on the pump characteristics of molecular lasers at difference frequencies with otical pumping under saturation conditions. ZhPS, v. 36, no. 3, 1982, 389-396.

118. Stepanov, B.I., S.A. Trushin, and V.V. Churakov (0). Theoretical study on emission parameters of optically pumped molecular lasers at difference frequencies under saturation conditions. ZhPS, v. 36, no. 4, 1982, 562-568.

119. Titov, Ye.A., and V.A. Ulybin (159). Effect of the quadratic Doppler effect on the absorption line shape for trapped particles. KE, no. 3, 1982, 500-504.

120. Zadvernyuk, S.I., and V.P. Sologub (0). Experimental study on fluctuations in the radiation characteristics of gas lasers. Sb 7, 70-73. (TVKE, 29/82, 607)

121. Zakrevskiy, N.V., G.A. Luk'yanov, and S.I. Tserkovnyy (0). Kinetics of the helium level population in a plasma flow. Sb 4, 909-910. (RZhF, 3/82, 3G703)

D. CHEMICAL LASERS

1. $F_2+H_2(D_2)$

122. Bashkin, A.S., A.N. Orayevskiy, V.N. Tomashov, and N.N. Yuryshev (1). Study on a high-pressure chemical HF laser based on an H_2-SF_6 mixture. KE, no. 3, 1982, 625-628.

123. Bashkin, A.S., A.N. Orayevskiy, V.N. Tomashov, and N.N. Yuryshev (1). Feasibility of achieving high specific lasing parameters in a chain reaction HF laser. KE, no. 3, 1982, 628-630.

124. Bashkin, A.S., A.N. Orayevskiy, V.N. Tomashov, and N.N. Yuryshev (1). Effect of initiation on-set on the parameters of an H_2/F_2 laser. KE, no. 3, 1982, 630-632.

2. Photodissociative

125. Zuyev, V.S., and Ye.P. Orlov (1). Stimulated scattering of light by temperature waves excited in thermodynamically nonequilibrium media, allowing for the enthalpy of photo-controlled chemical reactions. Fizicheskiy institut AN SSSR. Preprint, no. 145, 1981, 21 p. (RZhF, 3/82, 3D1203)

3. Transfer

126. Bashkin, A.S., N.P. Vagin, L.V. Kulakov, A.N. Orayevskiy, Yu.P. Podmar'kov, O.Ye. Porodinkov, M.I. Prishchepa, and N.N. Yuryshev (1). High-efficiency photoinitiated chemical D_2-F_2-CO_2 laser. KE, no. 3, 1982, 624-625.

127. Grigor'yev, F.V., V.V. Kalinovskiy, L.M. Lavrov, G.A. Mishuchkov, and L.N. Shornikov (0). Shortening the radiation pulses from a chemical DF-CO_2 laser. KE, no. 4, 1982, 825-827.

4. H_2CO+Cl_2

128. Bokun, V.Ch., and S.A. Sotnichenko (67). Chemical laser based on the photochemical reaction of formaldehyde and chloride. Kinetika i kataliz, no. 2, 1982, 311-314.

5. O_2+I_2

129. Didyukov, A.I., Yu.I. Krasnoshchekov, Yu.A. Kulagin, V.A. Morozov, S.A. Reshetnyak, and L.A. Shelepin (1). Kinetics of physical processes in an oxygen-iodine medium. KE, no. 4, 1982, 645-655.

130. Didyukov, A.I., Yu.I. Krasnoshchekov, Yu.A. Kulagin, V.A. Morozov, S.A. Reshetnyak, and L.A. Shelepin (1). Photolytic generator of excited oxygen $O_2(a^1\Delta g)$. KE, no. 4, 1982, 731-738.

6. Miscellaneous

131. Izmaylov, I.A. (51). Study on the theory of electron transition chemical lasers. Kiyevskiy GU. Dissertation, 1980, 16 p. (KLDVAD, 4/82, 5238)

E. COMPONENTS

1. Resonators

a. Design and Performance

132. Bel'dyugin, I.M., and Ye.M. Zemskov (0). Evaluating the fields in resonators with wavefront reversing mirrors. KE, no. 4, 1982, 817-820.

133. Boytsov, V.F., and A.G. Vladimirov (0). Change in the axial contour of a ring resonator from mirror misalignment. OiS, v. 52, no. 4, 1982, 724-725.

134. Bykov, V.P., V.K. Klinkov, and Z.S. Sazonova (18). Motion of beams in a multipath laser cuvette. KE, no. 3, 1982, 462-467.

135. Gavrilov, V., and A. Orlov (0). Possibility of compensating the effect of imperfections in the elements of a laser resonator on the polarization characteristics of the radiation. Sb 8, 62-63. (TVKE, 29/82, 619)

136. Kutsak, A.A., G.A. Skripko, and V.R. Sender (0). Some characteristics of a prismatic ring resonator. ZhPS, v. 36, no. 3, 1982, 407-413.

137. Lariontsev, Ye.G. (2). Wave processes in solid state lasers with multimirror resonators. Moskovskiy GU. Dissertation, 1980, 27 p. (TVKE, 30/82, 589)

b. Mode Kinetics

138. Bel'tyugov, V.N. (75). Diffraction methods for mode selection in gas lasers. Institut avtomatiki i elektrometrii SOAN. Dissertation, 1982, 15 p. (TVKE, 30/82, 821)

139. Nasyrov, K.A. (193). Self-oscillation in the angle of polarization rotation in a two-way amplifier. KE, no. 3, 1982, 599-601.

2. Pump Sources

140. Burtsev, V.A., A.A. Kondakov, R.F. Kurunov, N.Yu. Lebedev, V.G. Smirnov, and V.F. Shanskiy (0). Experimental study on the instability of a semi-self-sustained discharge. Part 1. Sb 4, 827-828. (RZhF, 4/82, 4G548)

141. Bystritskiy, V.M., I.Z. Gleyzer, A.N. Didenko, A.M. Tolopa, and Yu.P. Usov (336). Ion beam for pumping lasers. Otkr izobr, no. 15, 1982, 816316.

142. Dul'nev, G.N., Ye.V. Zav'yalov, A.M. Marugin, V.M. Ovchinnikov, V.G. Parfenov, and A.V. Sharkov (30). Thermal model and method for evaluating the thermal field of a radiation source. IVUZ Priboro, no. 4, 1982, 80-84.

143. Gadiyak, G.V., and V.A. Shveygert (0). Numerical modeling of a non-self-maintained discharge in its own magnetic field. Sb 4, 839-840. (RZhF, 3/82, 3G635)

144. Gadiyak, G.V., A.G. Ponomarenko, and V.A. Shveygert (193). Development of a self-sustained discharge in fields less than the self-breakdown field. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Preprint, no. 26, 1981, 20 p. (RZhF, 3/82, 3G708)

145. Losev, V.F., and V.F. Tarasenko (0). E-beam stabilized discharge in (Ar,Kr,Ne):Xe:CCl_4 mixtures. Sb 4, 857-858. (RZhF, 4/82, 4G550)

146. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (3). Power supply for a gas-discharge flashlamp. Author's certificate USSR, no. 818040, 30 March 1981. (RZhF, 3/82, 3D935)

147. Stanco, J., J. Milewski, and P. Wawrzynczyk (NS). Experiments with r-f stabilization of a large-volume d-c discharge for CO_2 lasers. Sb 4, 867-868. (RZhF, 4/82, 4G552)

148. Sulakshin, S.S., and A.M. Tolopa (336). Coaxial pumping of a gas laser by a high-power focused proton beam. ZhTF P, no. 7, 1982, 385-388.

149. Zav'yalov, Ye.V., and V.G. Parfenov (30). Evaluating the thermo-elastic state of a lamp element. IVUZ Priboro, no. 3, 1982, 94-96.

3. Cooling Systems

150. Yezhkov, A.N., and N.A. Trofimov (0). Study on the effect of the boundary layer of the liquid for cooling the flashlamp, on the radiation stability of an LT-2 laser. Sb 9, 24-28. (RZhRadiot, 3/82, 3Ye423)

4. Deflectors

151. Mankevich, S.K., A.I. Nagayev, V.N. Parygin, S.Yu. Pashin, G.N. Stavrakov, and S.V. Khorkin (0). Optical deflection using an e-beam spatial modulator. RiE, no. 3, 1982, 529-533.

152. Sevruk, B.B. (0). Comparative analysis of the resolution of gradient electrooptic deflectors. OiS, v. 52, no. 4, 1982, 726-728.

5. Diffraction Gratings

153. Lyubimov, A.I., K.S. Mustafin, and V.A. Seleznev (7). Producing holographic diffraction gratings with saw-toothed groove profiles. OMP, no. 4, 1982, 32-34.

6. Focusers

154. Kotlyarov, B.P., and V.S. Kovalenko (106). Method for visual focusing of optical systems on an object. Author's certificate USSR, no. 824107, 25 April 1981. (RZhRadiot, 4/82, 4Ye395)

7. Filters

155. Dolinin, N.A. (0). Optimal filter localizing the main maximum of an optical signal for evaluating the moment of its arrival. Radiotekhnika, no. 11, 1981, 82-83. (RZhRadiot, 3/82, 3Ye427)

156. Gyulamiryan, A.L., A.V. Mamayev, N.F. Pilipetskiy, and V.V. Shkunov (0). Tunable nonlinear fourwave filter. OiS, v. 52, no. 3, 1982, 387-389.

8. Beam Splitters

157. Vvedenskiy, V.D., and Ye.G. Stolov (0). Optical beam splitter. Author's certificate USSR, no. 822123, 16 April 1981. (RZhRadiot, 3/82, 3Ye431)

9. Mirrors

158. Belukiewicz, J., A. Witkowski, A. Swatowski, and T. Kostrzewa (NS). Inclination mechanism for a laser resonator mirror. Patent Poland, no. 109189, 31 Jan 1981. (RZhRadiot, 4/82, 4Ye396)

159. Dedlovskiy, M.M. (15). Material for cleaning polarized surfaces of optical elements. Author's certificate USSR, no. 878377, 7 Nov 1981. (RZhRadiot, 4/82, 4Ye406)

160. Firtsak, Yu.Yu., I.V. Smaga, and T.N. Kurochkina (0). Optical coatings for elements and devices in laser engineering. Sb 10, 230-233. (RZhRadiot, 3/82, 3Ye436)

161. Kolodnyy, G.Ya., Ye.A. Levchuk, Yu.D. Poryadin, and P.P. Yakovlev (0). Multilayer interference coatings in quantum electronics. Sb 1, 93-101. (TVKE, 30/82, 731)

162. Kostyukevich, V.I., M.A. Ageyeva, and A.V. Semenov (0). Device for automatic adjustment of a composite mirror. Author's certificate USSR, no. 838633, 18 June 1981. (RZhRadiot, 4/82, 4Ye391)

163. Loya, V.Yu., M.I. Golovey, and A.V. Lada (0). Coatings for optical elements, consisting of $MgF_2 \cdot BaF_2$ and $PbF_2 \cdot SrF_2$ alloys. Sb 10, 194-195. (RZhRadiot, 3/82, 3Ye435)

164. Nicolita, F. (NS). Method for fabricating a laser mirror. Patent Romania, no. 70751, 15 Jan 1980. (RZhRadiot, 3/82, 3Ye407)

165. Pogorelova, G.F., and V.A. Chadyuk (106). Fizeau effect in corner reflectors. Tr 1, 34-36. (RZhRadiot, 3/82, 3Ye446)

10. Detectors

166. Anitsov, E.I., L.V. Bakanov, K.N. Yermakov, et al (252). Vertex detector for a magnetic multifrequency laser streamer spectrometer. Leningradskiy institut yadernoy fiziki. Preprint, no. 709, 1981, 14 p. (KL, 18/82, 15025)

167. Pozin, P.A. (0). Efficiency of an optical signal detector with pulse position modulation by polarization. Sb 11, 22-29. (RZhRadiot, 4/82, 4Ye365)

168. Smagin, A.G., M.N. Gushchin, and B.G. Mil'shteyn (0). Fundamental characteristics of a piezoelectric IR detector. RiE, no. 3, 1982, 525-528.

169. Stamkulov, A.A. (242). Low-threshold $Ga_{1-x}Al_xAs$ photodetectors in the visible range. Sb 12, 79-82. (RZhF, 4/82, 4D1003)

170. Yelfitov, O.V., L.S. Kremenchugskiy, and S.K. Sklyarenko (5). Coordinate-sensitive pyroelectric radiation detector. Author's certificate USSR, no. 692339, 23 June 1981. (RZhF, 4/82, 4D1013)

171. Zagoruyko, A.S., and Yu.V. Troitskiy (0). Verifying linearity and construction characteristics of photodetectors when using optical filters with unknown transmittances. Avtometriya, no. 2, 1982, 93-95.

11. Modulators

172. Budyanov, V.P., A.K., Grebnev, and Yu.Ye. Rogovskoy (0). Photoconverter of the ratio of two light beams. Author's certificate USSR, no. 836790, 9 June 1981. (RZhRadiot, 4/82, 4Ye394)

173. D'yakov, V.A., P.V. Kozlov, S.A. Magnitskiy, L.S. Telegin, and V.G. Tunkin (2). Production of potassium methaniobate single crystals for use in modulating intense laser radiation. Kristal, no. 2, 1982, 403.

174. Geydur, S.A. (30). Study on the piezooptic properties of GaP and GaS and development of laser modulators based on them. Leningradskiy institut tochnoy mekhaniki i optiki. Dissertation, 1981, 19 p. (KLDVAD, 3/82, 3902)

175. Geydur, S.A., K.I. Krylov, V.T. Prokopenko, and A.D. Yas'kov (0). Photoelastic light modulator based on gallium arsenide and gallium phosphide crystals. OiS, v. 52, no. 4, 1982, 729-732.

176. Khulugurov, V.M., B.D. Lobanov, V.A. Chepurnoy, Yu.M. Titov, N.A. Ivanov, and I.A. Parfianovich (313). Passive Q-switch for a laser resonator. Otkr izobr, no. 17, 1982, 818423.

177. Malkov, A.V., A.Ya. Filev, T.A. Govorukhina, and L.A. Neverov (0). Method for stabilizing the contrast in a pyroelectric crystal electrooptic modulator. Author's certificate USSR, no. 830278, 15 May 1981. (RZhRadiot, 4/82, 4Ye153)

178. Niechoda, Z., and W. Wolinski (NS). Acoustooptic resonator Q-switch for a c-w Nd:YAG laser. Elektronika [Poland], no. 7-8, 1981, 37-38. (RZhF, 4/82, 4D1284)

179. Selitskiy, A.G., V.V. Bondarenko, and Ye.V. Berdennikova (110). Pulsed modulation of laser radiation by a magnetooptic modulator. ZhTF, no. 4, 1982, 807-808.

180. Zubakov, A.V., L.F. Linnik, A.I. Liptuga, and V.K. Malyutenko (6). IR laser Q-switch. Otkr izobr, no. 13, 1982, 822724.

F. NONLINEAR OPTICS

1. Frequency Conversion

181. Bakhramov, S.A., I.G. Kirin, P.K. Khabibullayev, and N.Sh. Shaabdurakhmanova (0). Effect of resonant three-photon ionization on frequency conversion in alkali metal vapors. IAN Uz, no. 5, 1981, 69-73. (RZhF, 3/82, 3D1333)

182. Basov, N.G., V.I. Kovalev, M.A. Musayev, and F.S. Fayzullov (1). Study on reflection during four-wave interaction in resonant gases at 10.6 μm. Fizicheskiy institut AN SSSR. Preprint, no. 204, 1981, 18 p. (RZhF, 3/82, 3D1332)

183. Belyakov, V.A., N.V. Shipov (140). Theory on nonlinear frequency conversion in cholesteric liquid crystals. ZhETF, v. 82, no. 4, 1982, 1159-1169.

184. Chaplik, A.V. (0). Nonlinear optical characteristics of a two-dimensional electron plasma. Sb 13, 79-81. (RZhF, 4/82, 4D1305)

185. Chmela, P. (NS). Classical theory of sum-frequency generation by coherent nonlinear optical mixing of coherent and chaotic radiation. Part 1. Short-parameter solution. CJP, v. B31, no. 9, 1981, 977-998. (RZhF, 3/82, 3D1321)

186. Grigor'yan, V.S. (15). Conversion of ultrashort pulses during resonance interactions with a medium. Institut radiotekhniki i elektroniki AN SSSR. Dissertation, 1981, 23 p. (KLDVAD, 4/82, 5230)

187. Grigor'yants, V.V., and Yu.K. Chamorovskiy (15). Using fiber Raman converters to study back-scattering in multimode fiber optics. KE, no. 3, 1982, 586 588.

188. Karamzin, Yu.N., A.P. Sukhorukov, and T.S. Filipchuk (71). Theory of second harmonic generation by short pulses, allowing for second order dispersion effects. Institut prikladnoy matematiki AN SSSR. Preprint, no. 106, 1981, 27 p. (KL, 11/82, 9235)

189. Kalintsev, A.G. (7). Optical frequency conversion in nonlinear media by sum and difference frequency generation. Gosudarstvennyy opticheskiy institut. Dissertation, 1980, 14 p. (KLDVAD, 4/82, 5240)

190. Poluektov, I.A., and A.V. Nazarkin (1). Formation of self-focused traces during second harmonic generation under conditions of coherent two-photon interaction of light beams with resonant media. KE, no. 4, 1982, 725-731.

191. Shiyanovskiy, S.V. (181). Second harmonic generation in chiral liquid crystals. UFZh, no. 3, 1982, 361-367.

192. Tagiyev, Z.A. (0). Theory on lasing at a summed frequency in an external resonator at approximately desired intensity. ZhPS, v. 36, no. 4, 1982, 603-606.

193. Vtyurin, A.N., V.P. Yermakov, B.I. Ostrovskiy, and V.F. Shabanov (0). Study on optical second harmonic generation in ferroelectric liquid crystal. PSS, v. B107, no. 2, 1981, 397-402. (RZhF, 4/82, 4D1303)

2. Parametric Processes

194. Aleksandrov, A.V., S.A. Pleshanov, and V.S. Solomatin (2). Characteristics of resonant parametric conversion of IR radiation in sodium vapor. KE, no. 3, 1982, 541-548.

195. Barykinskiy, G.M., V.V. Lebedev, and V.M. Plyasulya (159). Spectral properties of resonant four-photon parametric oscillation. KE, no. 3, 1982, 526-531.

196. Kitayeva, G.Kh., D.N. Klyshko, and I.V. Taubin (2). Theory on parametric scattering and a method for making absolute measurements of optical brightness. KE, no. 3, 1982, 561-568.

197. Shmelev, G.M., Nguyen Kuang Bau, and Vo Khong An' (52). Parametric conversion of plasmons and phonons in semiconductors. Ob"yedinennyy institut yadernykh issledovaniy. Soobshcheniye, no. R17-81-600, 1981, 5 p. (RZhF, 3/82, 3Ye1274)

3. Stimulated Scattering

a. Raman

198. Apanasevich, P.A., A.A. Afanas'yev, A.S. Grabchikov, M.V. Korol'kov, and V.A. Orlovich (0). Dependence of threshold and spectral characteristics of a Raman laser on the period of spatially-periodic pumping. ZhPS, v. 36, no. 3, 1982, 396-402.

199. Apanasevich, P.A., S.A. Batishche, V.A. Gansha, A.S. Grabchikov, N.A. Malevich, V.A. Mostovnikov, and V.A. Orlovich (3). High-efficiency stimulated Raman scattering of frequency converted wideband radiation in compressed hydrogen. ZhTF, no. 4, 1982, 808-809.

200. Brekhovskikh, G.L. (1). Experimental detection and study on the phenomenon of optical wavefront recording and image reconstruction in stimulated Raman scattering. Fizicheskiy institut AN SSSR. Dissertation, 1981, 22 p. (KLDVAD, 3/82, 3525)

201. Glushko, B.A., M.Ye. Movsesyan, and T.O. Ovakimyan (0). Study on stimulated electron Raman scattering processes and stimulated resonant emission from potassium vapor in a buffer gas. OiS, v. 52, no. 4, 1982, 762-764.

202. Nikitin, S.Yu. (2). Theory on coherent Raman mixing. KE, no. 3, 1982, 467-478.

b. Brillouin

203. Andreyev, A.V., N.M. Zanadvorov, V.I. Kryzhanovskiy, L.Ya. Kuznetsova, A.A. Mak, V.A. Serebryakov, N.A. Solov'yev, and A.N. Shatsev (0). Stimulated Brillouin scattering in a laser plasma. Sb 5, 203-204. (RZhF, 3/82, 3G630)

204. Yefimkov, V.F., I.G. Zubarev, A.V. Kotov, and S.I. Mikhaylov (1). Stimulated Brillouin scattering of spatially inhomogeneous pumping with few angular modes. KE, no. 3, 1982, 632-634.

4. Self-focusing

5. Acoustic Interaction

205. Belyayev, Ye.B., A.P. Godlevskiy, Yu.D. Kopytin, N.P. Krasnenko, V.P. Muravskiy, and L.G. Shamanayeva (78). Generation of acoustic radiation during laser breakdown of gas-dispersion media. ZhTF P, no. 6, 1982, 333-337.

206. Gagarin, A.P., S.I. Svetlichnaya, and A.K. Sinopal'nikov (0). Optical recording of initial stages of the propagation of an acoustic pulsed in transparent media. FTT, no., 4, 1982, 1253 1254.

207. Kalyuzhnyy, G.S. (1). Acoustic effects occurring in the interaction of ionizing particle and laser beams with condensed media. Fizicheskiy institut AN SSSR. Dissertation, 1981, 19 p. (KLDVAD, 4/82, 5241)

b. Brillouin

203. Andreyev, A.V., N.M. Zanadvorov, V.I. Kryzhanovskiy, L.Ya. Kuznetsova, A.A. Mak, V.A. Serebryakov, N.A. Solov'yev, and A.N. Shatsev (0). Stimulated Brillouin scattering in a laser plasma. Sb 5, 203-204. (RZhF, 3/82, 3G630)

204. Yefimkov, V.F., I.G. Zubarev, A.V. Kotov, and S.I. Mikhaylov (1). Stimulated Brillouin scattering of spatially inhomogeneous pumping with few angular modes. KE, no. 3, 1982, 632-634.

4. Self-focusing

5. Acoustic Interaction

205. Belyayev, Ye.B., A.P. Godlevskiy, Yu.D. Kopytin, N.P. Krasnenko, V.P. Muravskiy, and L.G. Shamanayeva (78). Generation of acoustic radiation during laser breakdown of gas-dispersion media. ZhTF P, no. 6, 1982, 333-337.

206. Gagarin, A.F., S.I. Svetlichnaya, and A.K. Sinopal'nikov (0). Optical recording of initial stages of the propagation of an acoustic pulsed in transparent media. FTT, no. 4, 1982, 1253-1254.

207. Kalyuzhnyy, G.S. (1). Acoustic effects occurring in the interaction of ionizing particle and laser beams with condensed media. Fizicheskiy institut AN SSSR. Dissertation, 1981, 19 p. (KLDVAD, 4/82, 5241)

208. Mayevskiy, S.M., V.D. Nazarov, and V.F. Petrik (0). Feasibility of constructing acoustic sensors using a multimode stepped fiber. ZhTF P, no. 5, 1982, 284-287.

209. Smirnov, Ye.N. (51). Bragg diffraction of light by ultrasonic waves during strong acoustooptic coupling. Kiyevskiy GU. Dissertation, 1980, 17 p. (KLDVAD, 4/82, 5293)

6. General Theory

210. Adamov, M.N., and Yu.Yu. Dmitriyev (12). Dynamic hyperpolarizability and nonlinear susceptibilities of degenerate states. Leningradskiy GU. Vestnik, no. 22, 1981, 30-34. (RZhF, 3/82, 3D1308)

211. Altayev, N.K. (0). Quantum statistical approach to the description of problems in the interaction of matter with radiation. Deposit at VINITI, no. 5696-81, 16 Dec 1981, 40 p. (RZhF, 4/82, 4D1186)

212. Andreyev, N.F., V.I. Bespalov, A.M. Kiselev, G.A. Pasmanik, and A.A. Shilov (426). Combined interactions in opposed light wave fields. ZhETF, v. 82, no. 4, 1982, 1047-1057.

213. Arkhipkin, V.G., Yu.I. Geller, and A.K. Popov (210). Effect of multiphoton ionization and saturation on lasing by nonlinear mixing in resonant gaseous media. Institut fiziki SOAN. Preprint, no. IFSO-167F, Krasnoyarsk, 1981, 25 p. (KL, 18/82, 15025)

214. Baranova, N.B., and B.Ya. Zel'dovich (17). Bragg three-wave mixing for optical wavefront reversal. DAN SSSR, v. 263, no. 2, 1982, 325-327.

215. Bel'dyugin, I.M., and I.G. Zubarev (1). Theory on wavefront reversal of radiation with spatially inhomogeneously distributed average intensity. KE, no. 3, 1982, 548-553.

216. Burov, L.I., and A.M. Sarzhevskiy (87). Change in the polarization of radiation propagating through isotropic media with two-photon absorption. DAN B, no. 4, 1982, 325-328.

217. Chmela, P. (NS). Nonlinear optical processes and anti-grouping of photons. JMO, no. 11, 1981, 307-314. (RZhF, 4/82, 4D1175)

218. Glazman, L.I., and V.M. Tsukernik (0). Multiphoton absorption by Fermi systems under pulsed and c-w pumping. Fizika nizkikh temperatur, no. 11, 1981, 1390-1400. (RZhF, 3/82, 3D1150)

219. Gorelik, V.S., and V.G. Plotnichenko (1). Group theory properties of crystal vibrations, allowing for spatial symmetry. Tr 2, 141-187.

220. Hrasko, P. (NS). Space-time description of two-photon decay. Kozponti fizikai kutato intezet, no. 63, 1981, 22 p. (RZhF, 3/82, 3D1311)

221. Idiatulin, V.S. (140). Diffraction efficiency of optically induced gratings. ZhTF, no. 3, 1982, 514-516.

222. Isayev, M.P., and V.R. Kushnir (16). Self-action in a c-w solid-state laser radiation field. KE, no. 4, 1982, 820-821.

223. Kamalov, V.F., and Yu.P. Svirko (2). Optical nonlinear susceptibility of F-centers. KE, no. 3, 1982, 618-620.

224. Karamzin, Yu.N., and A.P. Sukhorukov (0). Optimization problems in nonlinear optics. Sb 14, 183-189.

225. Kryzhanovskiy, B.V. (59). Polarization of electron Raman scattering and resonance fluorescence in an intense pumping field. Institut fizicheskikh issledovaniy AN ArmSSR. Dissertation, 1980, 20 p. (KLDVAD, 3/82, 3556)

226. Kukhtarev, N.V. (5). Optical distributed feedback in cholesteric liquid crystals. Institut fiziki AN UkrSSR. Preprint, no. 11, 1981, 23 p. (RZhF, 4/82, 4D1191)

227. Kuznetsova, T.I. (1). Interaction of two plane waves propagating in a nonlinear amplifying medium. KE, no. 4, 1982, 790-793.

228. Makhviladze, T.M., and M.Ye. Sarychev (1). Theory of phase transitions in various systems with electromagnetic interaction and its application in ferroelectrics. Tr 2, 188-223.

229. Pilipetskiy, N.F., A.N. Sudarkin, and V.V. Shkunov (17). Wavefront reversal by a surface of varying reflectivity. KE, no. 4, 1982, 835-837.

230. Popov, A.K., V.M. Shalayev, and V.Z. Yakhnin (210,411). Optically induced gas drift under conditions of periodic pulsed excitation. ZhETF, v. 82, no. 3, 1982, 725-739.

231. Rautian, S.G., and A.G. Rudavets (75). Rotation of atoms in light, and magnetic resonance. ZhETF P, v. 35, no. 8, 1982, 309-312.

232. Samartsev, V.V. (3). Study on the effects of nonlinear interaction of coherent radiation with resonant media. Institut fiziki AN BSSR. Dissertation, 1980, 32 p. (KLDVAD, 4/82, 5192)

233. Sarkisyan, M.A. (59). Multiphoton resonance processes under conditions of self-induced adiabatic inversion. Institut fizicheskikh issledovaniy AN ARmSSR. Dissertation, 1980, 20 p. (KLDVAD, 3/82, 3597)

234. Shipilov, K.F. (1). Generation and formation of short pulses of coherent radiation by nonlinear optical processes in organic liquids. Fizicheskiy institut AN SSSR. Dissertation, 1981, 19 p. (KLDVAD, 3/82, 3629)

235. Slabko, V.V. (210). Nonlinear resonance processes and shortwave generation in metal vapor. Institut fiziki SOAN. Dissertation, 16 p. (KLDVAD, 4/82, 5290)

236. Surovegin, A.L. (2). Nonlinear higher-order resonance processes in atoms. Moskovskiy GU. Dissertation, 1981, 18 p. (KLDVAD, 3/82, 3607)

237. Vysloukh, V.A. (0). Experiments with optical solitons. UFN, v. 136, no. 3, 1982, 518-531.

238. Yakovlenko, S.I. (23). Absorption of high-power resonant radiation during collision line-broadening. UFN, v. 136, no. 4, 1982, 593-620.

G. SPECTROSCOPY OF LASER MATERIALS

239. Arbuzov, V.I., V.A. Bonch-Bruyevich, Ye.I. Galant, A.K. Przhevuskiy, and M.N. Tolstoy (7). Inhomogeneous structure of spectra from Eu^{2+} and Ce^{3+} ions in quartz glass. FiKhS, no. 2, 1982, 216-222.

240. Arbuzov, V.I., L.V. Viktorov, Ye.I. Galant, A.K. Przhevuskiy, and M.N. Tolstoy (7). Luminescence efficiency of Eu^{2+} and Ce^{3+} ions in quartz glass. FiKhS, no. 2, 1982, 223-228.

241. Baranov, A.V. and Ya.S. Bobovich (0). Giant Raman scattering and a spectral analysis method for studying matter. OiS, v. 52, no. 3, 1982, 385-387.

242. Kuznetsov, V.V., G.Ye. Nikolayev, V.V. Vinogradov, V.B. Shilov, and A.I. Usharov (0). Formation of the gain spectrum and ion pair tuning in a dissociated rhodamine 6G molecule. ZhPS, v. 36, no. 3, 1982, 497-499.

243. Minkov, B.I., S.Ya. Geguzina, V.V. Okorokov, V.A. Korniyenko, and S.I. Kireyeva (188). Effect of UV radiation on the optical and laser characteristics of YAG:Nd active elements. Tr 3, 10-17. (RZhF, 3/82, 3D967)

244. Minkov, B.I., V.I. Bonchkovskiy M.Z. Nesanelis, and V.G. Potapova (188). Determining the content of activating impurities in YAG:Nd single crystal laser rods. Tr 3, 231-234. (RZhF, 3/82, 3D966)

245. Nikolova, E.P., and B.L. Timan (0). Study on the structural purity of Nd^{3+} doped YAG single crystals using EPR. ZhPS, v. 36, no. 3, 1982, 479-482.

246. Shevandin, V.S. (7). Study on the spectroscopic properties of excited rhodamine molecules in solution. Gosudarstvennyy opticheskiy institut. Dissertation, 1981, 16 p. (KLDVAD, 3/82, 3627)

247. Stepanov, A.N., A.A. Perov, and S.P. Kabanov (0). Reactions of long-lived excited atoms with molecules. Sb 5, 451-452. (RZhF, 4/82, 4G55)

H. ULTRASHORT PULSE GENERATION

248. Kormer, S.B., G.G. Kochemasov, S.M. Kulikov, V.D. Nikolaiev, and S.A. Sukharev (0). Using nonlinear processes to form subnanosecond high-contrast laser pulses. ZhETF, v. 82, no. 4, 1982, 1079-1091.

249. Lisitsyn, V.N., V.N. Matrosov, V.P. Orekhova, Ye.V. Pestryakov, B.K. Sevast'yanov, V.I. Trunov, V.N. Zenin, and Yu.L. Remigaylo (159,206,13). Generating picosecond pulses in an alexandrite laser in the 0.7 - 0.8 μm range with passive mode-lock. KE, no. 3, 1982, 607-609.

250. Lisitsyn, V.N., Ye.V. Pestryakov, A.I. Trunov, M.A. Kudinova, Yu.L. Slominskiy, and A.I. Tolmachev (0). Generating picosecond pulses in a 1.318 μm YAG:Nd^{3+} laser with passive mode locking. ZhTF P, no. 8, 1982, 488-492.

251. Myshalov, P.I., B.A. Byshuk S.A. Tikhomirov, and G.B. Tolstorozhev (3). High-voltage laser spark discharger. PTE, no. 2, 1982, 142-144.

J. CRYSTAL GROWING

252. Nikolov, V., V. Petrov, and P. Peshev (NS). Determination of the real crystallization rate and its effect on the quality of YAG:Nd^{3+} single crystals grown by the Bridgman-Stockbarger method. Sb 1), 667-674. (RZhF, 3/82, 3Ye481)

K. THEORETICAL ASPECTS OF ADVANCED LASERS

253. Bratman, V.L., N.S. Ginzburg, and G.G. Denisov (426). Use of distributed feedback in a free-electron laser. ZhTF P, no. 21, 1981, 1320-1324.

254. Kondratenko, A.M., A.V. Pakhtusova, and Ye.L. Saldin (79). Using a free-electron laser to obtain high-energy opposed photon beams. Institut yadernoy fiziki SOAN. Preprint, no. 81-130, Novosibirsk, 1981, 22 p. (KL, 15/82, 12499)

255. Moiseyev, M.B. (132). Theoretical and experimental study on relativistic electron radiation in an undulator and from the edges of magnets. Tomskiy GU. Dissertation, 1981, 18 p. (KLDVAD, 3/82, 3578)

256. Serov, A.V. (1). Effect of inhomogeneity of an e-m wave field on the motion of particles in an undulator. ZhTF, no. 4, 1982, 813-815.

257. Varfolomeyev, A.A. (23). Synchronously pumped pulsed Compton lasers. Institut atomnoy energii. Preprint, no. 3501/14, 1981, 25 p. (RZhF, 3/82, 3D1153)

258. Vinokurov, N.A., P.D. Voblyy, G.A. Kornyukhin, G.N. Kulipanov, V.N. Litvinenko, N.A. Mezentsev, and A.N. Skrinskiy (79). Latest results and current status of work on an optical klystron mounted on the VEPP-3 electron storage device. Sb 16, 298-301, (RZhF, 4/82, 4V487)

L. GENERAL LASER THEORY

259. Alferov, D.F., Yu.A. Bashmakov, K.A. Belovintsev, Ye.G. Bessonov, A.V. Serov, and P.A. Cherenkov (1). Sources of stimulated emission based on resonant electron accelerators. Fizicheskiy institut AN SSSR. Preprint, no. 147, 1981, 20 p. (RZhF, 3/82, 3V469)

260. Antipenko, B.M., A.A. Mak, B.V. Sinitsyn, O.B. Raba, and T.V. Uvarova (0). New systems for exciting laser transitions. ZhTF, no. 3, 1982, 521-522.

261. Apanasevich, P.A., A.A. Afanas'yev, and A.I. Urbanovich (3). Transient energy transfer between opposed waves and narrowing of the lasing spectrum around the absorption line for a resonant medium in a resonator. KE, no. 4, 1982, 827-830.

262. Atsagortsyan, A.Z. (59). Cooperative energy transfer under conditions of coherent and incoherent excitation. Institut fizicheskikh issledovaniy AN ArmSSR. Dissertation, 1980, 18 p. (KLDVAD, 4/82, 5205)

263. Dzyublik, A.Ya. (181). Resonant absorption of neutrons by nuclei in crystals irradiated by laser radiation. ZhETF, v. 82, no. 4, 1982, 977-984.

264. Gordov, Ye.P., G.A. Koganov, and A.M. Khazanov (78). Method of the semiclassical concept in the quantum theory of lasers. Institut optiki atmosfery SOAN. Preprint, no. 37, 1981, 19 p. (KL, 14/82, 11752)

265. Isyanova, Ye.D., A.L. Levit, and V.M. Ovchinnikov (0). Traveling-wave ring resonator with a non-planar axial contour. ZhPS, v. 36, no. 3, 1982, 402-407.

266. Kamrukov, A.S., N.P. Kozlov, and Yu.S. Protasov (0). Dynamics and radiation from open (vacuum) "plasma focus" plasmadynamic discharges. TVT, no. 2, 1982, 359-275.

267. Kir'yanov, V.I., B.G. Bravyy, and G.K. Vasil'yev (67). Laser. Otkr izobr, no. 16, 1982, 884526.

268. Kondrashin, S.K. (84). Quantum paramagnetic traveling-wave amplifier. Author's certificate USSR, no. 724031, 18 June 1981. (RZhRadiot, 4/82, 4Ye80)

269. Manakov, S.V. (159). Propagation of pulse in a long laser amplifier. ZhETF P, v. 35, no. 5, 1982, 193-195.

270. Mironenko, V.R., and V.I. Yudson (72). Spontaneous noise and blurring of the lasing spectrum from a multimode solid state laser. KE, no. 3, 1982, 483-488.

271. Myagkov, S.A., and V.N. Sazonov (1). Transferring energy of translational motion to vibrational energy during collisions of polyatomic molecules in a resonant radiation field. DAN SSSR, v. 263, no. 4, 1982, 865-868.

272. Pokrovskiy, L.A., and A.M. Khazanov (0). Atomic correlations in a laser. TiMF, no. 1, 1982, 146-154. (RZhF, 4/82, 4D1202)

273. Rozanov, N.N. (0). Transverse field structure in a laser with saturation absorption. OiS, v. 52, no. 3, 1982, 548-552.

274. Safaryan, F.P. (0). Theory of radiationless electron excitation energy transfer between impurity ions in dielectric laser crystals. IAN Arm, no. 4, 1981, 295-309. (RZhF, 3/82, 3D721)

275. Shchuka, A.A. (0). The laser: ideas, years, people. Sb 1, 10-14. (TVKE, 30/82, 343)

276. Vinokurov, G.N., and V.I. Zhulin (0). Principles of radiation and interpretation of experiments on reflection from amplifying media. KE, no. 3, 1982, 553-560.

277. Voronyuk, L.V., O.V. Komarov, I.P. Pinkevich, A.M. Fedorchenko, and Yu.D. Shtepa (51). Population of excited levels in a recombining cesium plasma. ZhTF, no. 3, 1982, 562-565.

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

278. Alborova, V.K. (670). Using pulsed IR laser radiation to remove tattoos (clinical and experimental studies). Tsentral'nyy NI kozhno-venerologicheskiy institut. Dissertation, 1980, 18 p. (KLDVAD, 4/82, 6169)

279. Golubeva, N.A., and V.P. Shabayev (242). Role of aqueous structures in the biological effect of an He-Ne laser. Sb 12, 298-303. (DR, 4/82, 455)

280. Kabanov, S.P. (242). Possibilities of stimulating lactation in cows by He-Ne lasers. Sb 12, 314-320. (DR, 4/82, 548)

281. Laprun, I.B. (2). Effect of He-Ne laser radiation on the peroxide oxidation of lipids and various conjugate reactions in an organism. Moskovskiy GU. Dissertation, 1981, 14 p. (KLDVAD, 3/82, 3788)

282. Polivoda, M.D. (218). Possibilities of using laser radiation to stanch and prevent relapses of gastrointestinal hemorrhages. Experimental studies. II Moskovskiy gos meditsinskiy institut. Dissertation, 1980, 21 p. (KLDVAD, 4/82, 6325)

283. Ponomarenko, O.A. (242). Study on the biological effects of 632.8 nm red laser light on the embryonic development of Drosophila melanogaster flies. Sb 12, 224-227. (DR, 4/82, 439)

284. Shchelokova, L.G., and S.G. Glumov (666). Effect of presowing laser irradiation on the laboratory germination of seeds of medicinal herbs. Deposit at VINITI, no. 148-82 11 Jan 1982. 6 p. (DR. 4/82, 48)

285. Shapovalov, A.M. (671). Use of laser photocoagulation to stanch hemorrhages from acute stomach ulcers. Vsesoyuznyy nauchnyy tsentr khirurgii AMN SSSR. Dissertation, 1980, 22 p. (KLDVAD, 4/82, 6403)

B. COMMUNICATIONS SYSTEMS

286. Abramyan, A.S., and R.A. Kazaryan (59). Compensating for the effect of time-phase fluctuations in atmospheric optical heterodyne systems for data transmission. KE, no. 3, 1982, 601-604.

287. Andriyesh, A.M., and V.V. Ponomar' (44). Optical properties of glassy semiconductor chalcogenide fibers. KE, no. 3, 1982, 589-591.

288. Belousov, A.P., Ye.M. Dianov, I.S. Lisitskiy, T.M. Nesterova, V.G. Plotnichenko, and V.K. Sysoyev (1). Thallium halide single crystals with optical losses of less than 10 dB/km. KE, no. 4, 1982, 796-798.

289. Bazarov, Ye.N., A.T. Polukhin, Ye.I. Sverchkov, and G.I. Telegin (326). Feasibility for dispersionless propagation of an optical signal in a birefringent optically active single-mode fiber lightguide. KE, no. 4, 1982, 779-782.

290. Bazarov, Ye.N., A.L. Gorbushin, V.G. Kovalenko, A.T. Polukhin, Ye.I. Sverchkov, and G.I. Telegin (15). Changes in the polarization of optical signals in a single-mode fiber lightguide as a function of the location of disturbances in the lightguide. ZhTF, no. 4, 1982, 773-775.

291. Bazarov, Ye.N., A.T. Polukhin, Ye.I. Sverchkov, and G.I. Telegin (15). Dependence of losses due to disturbance centers in a single-mode fiber lightguide on output polarization of optical radiation. ZhTF, no. 4, 1982, 782-784.

292. Bratchikov, A.N. (0). Multimode radiator for an active optical phased antenna array using an injection semiconductor laser. Sb 17, 53-61. (RZhRadiot, 3/82, 3Ye168)

293. Budkin, L.A., V.N. Morozov, and A.I. Pikhtelev (0). Transmission of the etalon frequency by a communications channel containing a lightguide cable. RiE, no. 4, 1982, 813-819.

294. Dianov, Ye.M., M.Yu. Petrov, V.G. Plotnichenko, and V.K. Sysoyev (1). Estimating minimal optical losses in chalcogenide glasses. KE, no. 4, 1982, 798-800.

295. Dianov, Ye.M., L.S. Korniyenko, Ye.P. Nikitin, A.O. Rybaltovskiy, B.G. Skuybin, V.B. Sulimov, and P.V. Chernov (1). Pulsed optical bleaching of fiber lightguides with pure quartz glass cores. KE, no. 4, 1982, 801-803.

296. Gan'shin, V.A., M.E. Kubrinskaya, and V.Z. Petrova (119). Forming gradient lightguides in glass substrates. ZhTF, no. 4, 1982, 777-779.

297. Gukov, G.B., A.M. Noginov, and L.V. Strygin (118). Measuring instability in the optical length of lightguides during bending and heating. KE, no. 3, 1982, 613-615.

298. Gur'yanov, A.N., D.D. Gusovskiy, Ye.M. Dianov, M.M. Mirakyan, and V.B. Neustruyev (1). Polarization properties of glass fiber optic lightguides with noncircular cores and few propagation modes. KE, no. 4, 1982, 810-812.

299. Karpov, S.Yu. (4). Wave diffraction at a dielectric waveguide coupling. KE, no. 3, 1982, 605-607.

300. Klin, V.P., A.F. Kolesnichenko, S.V. Levyy, B.P. Nam, and Ye.K. Shmarev (106). Multichannel optical correlator. Otkr izobr, no. 14, 1982, 867194.

301. Kul'chin, Yu.N., and V.L. Smirnov (16). Diffraction of optical waves by dynamic gratings in semiconductor waveguides. KE, no. 4, 1982, 782-785.

302. Larin, Yu.T., T.A. Martynova, A.N. Mart'yanov, V.D. Nazarov, Ye.G. Fedorov, and G.A. Cherenkov (628). Study on the distribution of color centers along the length of gamma-irradiated fiber optics. KE, no. 3, 1982, 597-599.

303. Lavrov, V.N. (16). Study on the use of semiconductor injection lasers in fiber optic communication lines. Moskovskiy inzhenerno-fizicheskiy institut. Dissertation, 1981, 14 p. (KLDVAD, 3/82, 3563)

304. Malov, V.V., Z.M. Usmanova, and L.V. Iogansen (451). Theory on tunneling prismatic coupling in magnetically active degenerate optical waveguides. ZhTF, no. 4, 1982, 609-617.

305. Martynova, T.A., A.N. Mart'yanov, and G.A. Cherenkov (628). Optimizing the dispersion characteristics of fiber optics and the parameters of an optical radiator. KE, no. 3, 1982, 593-596.

306. Martynova, T.A. (0). Losses at fiber optic couplings under high temperatures. RiE, no. 3, 1982, 602-604.

307. Sebko, S.Ye., and V.P. Klimashin (0). Receiving devices for a channel in a turbulent atmosphere. IT, no. 4, 1982, 33-35.

308. Sychugov, V.A. (1), and J. Ctyroki (Czech, Russ transliteration: I. Chtyroki). Propagation and conversion of optical waves in graded planar waveguides. KE, no. 3, 1982, 634-637.

309. Zon, B.A., A.N. Ivakin, D.T. Alimov, and T.T. Urazbayev (137). Radio-frequency pulse generator. Otkr izobr, no. 15, 1982, 922998.

C. BEAM PROPAGATION

1. In the Atmosphere

310. Almayev, R.Kh., and A.G. Slesarev (220). Role of divergence of a laser beam in the dispersal of a droplet aerosol medium. Tr 4, 22-29. (RZhF, 4/82, 4D1331)

311. Almayev, R.Kh., and A.M. Skripkin (220). Thermal refraction of laser radiation in an aerosol medium containing solid particles. Tr 4, 92-98. (RZhF, 4/82, 4D1334)

312. Andreyev, S.D. (0). Optical characteristics of organic aerosols at laser probe frequencies in the IR. Sb 18, 100-102.

313. Andrusenko, A.M., V.P. Danil'chenko, V.S. Kupko, Ye.Kh. Petrenko, A.V. Prokopov, and G.Ye. Shulyakovskiy (0). Determining the refractive index for transient inhomogeneous low-atmospheric layers during high-precision optical ranging. IT, no. 4, 1982, 19-21.

314. Anur'yev, Ye.A. (30). Some questions on a projection optical ranging system. IVUZ Priboro, no. 4, 1982, 64-66.

315. Astakhov, V.I., V.V. Galaktionov, I.I. Zasavitskiy, Yu.V. Kosichkin, A.I. Nadezhdinskiy, A.N. Perov, A.Yu. Tishchenko, V.T. Trofimov, V.U. Khattatov, and A.P. Shotov (159). Long-path monitor of carbon monoxide concentration in the atmosphere using pulsed diode lasers. KE, no. 3, 1982, 531-536.

316. Balakirev, V.V., and Yu.P. Dyabin (0). Vertical structure of the aerosol extinction coefficient under conditions of limited visibility. Sb 18, 48-51.

317. Baranov, P.A., V.I. Kozintsev, V.N. Makarov, V.G. Nikiforov, and A.N. Novoselov (0). Dye laser for a lidar ozone-measuring device. ZhPS, v. 36, no. 4, 1982, 574-577.

318. Bazalitskaya, G.P., and G.Sh. Livshits (0). Polarization characteristics of the optical scattering function for a cloudless atmosphere. Sb 18, 125-128.

319. Bekturganov, B.K., A.I. Ivanov, L.M. Karimova, and V.N. Korovchenko (0). Study on spectral aerosol attenuation in the 0.31 - 1.01 μm region. Sb 18, 129-132.

320. Belan, V.D., and G.O. Zadde (0). Optical homogeneity of synoptic objects. Sb 18, 144-147.

321. Birich, L.N., A.I. German, I.S. Zhiguleva, V.Ye. Mel'nikov, N.N. Petrov, and A.P. Tikhonov (0). Airborne lidar probing of the cloud ceiling. Sb 19, 308-311. (RZhRadiot, 4/82, 4Ye562)

322. Bisyarin, V.P., and G.K. Tret'yakov (0). Measuring the microstructure of a moving cloud during the transition from leading edge to the central zone. Sb 18, 36-39.

323. Borisov, B.D., V.N. Genin, and M.V. Kabanov (0). Visibility in a scattering layer. Sb 18, 172-174.

324. Borovoy, A.G., N.I. Vagin, and S.N. Volkov (0). Direct and backscattering problems for optically scattering media during small-angle multiple scattering. Sb 18, 151-154.

325. Borovoy, A.G., and A.V. Ivonin (0). Speckle symmetry. Sb 18, 225-228.

326. Borovoy, A.G., N.I. Vagin, S.N. Volkov, and A.V. Ivonin (0). Rotation of the speckle structure in a Fraunhofer diffraction pattern. Sb 18, 229-232.

327. Brounshteyn, A.M., K.Ya. Kazakov, O.A. Nemets, and N.N. Paramonova (0). Aerosol absorption in the 8-12 μm region. Sb 18, 86-89.

328. Brounshteyn, A.M., and N.N. Paramonova (0). Comparison of the results of statistical analysis of the various masses given by attenuation of visible and IR radiation in surface boundary layers. Sb 18, 90-93.

329. Bukatyy, V.I., and I.A. Sutorikhin (0). Experimental study on the action of CO_2 laser radiation on carbon particles. FGiV, no. 2, 1982, 96-99.

330. Bukatyy, V.I., A.A. Tel'nikhin, and A.M. Shayduk (0). Dispersal of a solid combustible aerosol by a high-power light beam. ZhPS, v. 36, no. 4, 1982, 557-562.

331. Bukin, O.A., U.Kh. Kopvillem, S.Yu. Stolyarchuk, and V.A. Tyapkin (511). Raman spectrum lidar for studying the gas composition of the atmosphere. Deposit at VINITI, no. 5471-81, 2 Dec 1981, 15 p. (DR, 3/82, 117)

332. Busygin, V.P., A.B. Gavrilovich, and I.A. Slabskaya (0). Analysis of the light flux from a point source using various models for vertical aerosol distribution. Sb 18, 190-193.

333. Donchenko, V.A., M.V. Kabanov, Yu.I. Kulakov, and V.P. Petrov (0). Effect of the electric field constant on the reflection of optical radiation from a scattering medium. Sb 18, 200-203.

334. Dugin, V.P., M.V. Kabanov, Yu.G. Toporkov, O.B. Samarin, and G.S. Khmel'nitskiy (0). Study on the coefficient of absorption in the 9-11 μm spectral region for samples of aerosols originating from ground water. Sb 18, 28-31.

335. Dugin, V.P., Yu.G. Toporkov, and F.S. Yakupova (0). Method for determining complex refractive indices for aerosols using data from spectrophone measurements. Sb 18, 32-35.

336. Galileyskiy, V.P., G.O. Zadde, and I.V. Samokhvalov (0). Height of atmospheric homogeneity as a function of season. Sb 18, 137-140.

337. Galileyskiy, V.P., and G.O. Zadde (0). Height of atmospheric homogeneity as an indication of weather. Sb 18, 141-143.

338. Glushko, V.N., G.Sh. Livshits, and P.G. Lysenko (0). Method for determining the polarization characteristics of aerosol haze. Sb 18, 121-124.

339. Godlevskiy, A.P., S.V. Lazarev, N.N. Prilepskikh, and V.V. Svishchenko (0). Shielding of optical radiation in aerosols caused by the breakdown effect. Deposit at VINITI, no. 5894-81, 28 Dec 1981, 7 p. (RZhF, 4/82, 4D1341)

340. Gorchakov, G.I., A.P. Prishivalko, and I.M. Radyuk (0). Using a system of two-layer particles to model the aerosol characteristics of optical scattering. Sb 18, 22-25.

341. Gordin, M.P., V.P. Sadovnikov, and G.M. Strelkov (15). Thermal self-action of laser beams in the atmosphere. Institut radiotekhniki i elektroniki AN SSSR. Preprint, no. 16/319, 1981, 55 p. (RZhF, 3/82, 3D1350)

342. Goryachev, B.V., S.B. Mogil'nitskiy, and B.A. Savel'yev (0). Evaluating the limits of applicability of Bouguer's law to the propagation of narrow radiation beams in the atmosphere. Sb 18, 194-196.

343. Gyulamiryan, A.L., A.V. Mamayev, N.F. Pilipetskiy, and V.V. Shkunov (0). Wavefront reversal in weak frequency shifted signals during stimulated Brillouin scattering. Sb 18, 236-240.

344. Ivanov, V.P. (148). Application of the principles of radioholography in the probing of an inhomogeneous ionosphere. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR. Dissertation, 1981, 15 p. (KLDVAD, 3/82, 3548)

345. Ivanov, Yu.V., and Yu.D. Kopytin (78). Selective interaction of a laser pulse train with an aerosol medium. KE, no. 3, 1982, 591-593.

346. Ivlev, L.S. (0). Improving on a unified model of atmospheric aerosols for optical measurements in the 0.3 - 15 μm spectral region. Sb 18, 60-62.

347. Katsev, I.L (0). Transient scattering of spatially bound and ultrashort light pulses. Sb 20, 67-83.

348. Kavkyanov, S.I., G.M. Krekov (78). Statistical structure of optical haze from a pulsed radiator in a cloudy medium. FAiO, no. 3, 1982, 308-313.

349. Kolosov, M.A., A.V. Sokolov, L.V. Fedorova, and R.A. Shirey (0). Methods for determining the microstructure of clouds and fog by measurement data on attenuated laser radiation. Sb 19, 295-301. (RZhRadiot, 4/82, 4Ye560)

350. Konefal, Z., J. Szczepanski, and J. Heldt (NS). NO_2 detection in the atmosphere using differential absorption lidar. APP, v. A60, no. 2, 1981, 273-278. (RZhF, 3/82, 3D1115)

351. Kozlov, V.S., and V.Ya. Fadeyev (0). Study on optical and microphysical properties of haze aerosols. Sb 18, 78-81.

352. Krekov, G.M. (132). Study on optical channels for ranging in an aerosol atmosphere. Tomskiy GU. Dissertation, 1981, 36 p. (KLDVAD, 4/82, 5185)

353. Kruchenitskiy, G.M., and G.Ye. Shulyakovskiy (0). Determining the microstructure parameters of droplet clouds by measuring the attenuation coefficients at two wavelengths. Sb 19, 311-313. (RZhRadiot, 4/82, 4Ye415)

354. Krysov, N.G. (0). Optimizing the parameters of optical ranging systems. Sb 21, 68-73. (RZhRadiot 3/82, 3Ye456)

355. Lamden, K.S., and A.V. Smirnov (0). Asymptotic moments in time for optical pulses scattered by a humid medium layer. Sb 18, 159-161.

356. Lazarev, S.V., V.V. Svishchenko, I.A. Khokhlov, and V.A. Fokin (0). Nonlinear scattering of light by thermal halos due to the action of an optical beam on an aerosol of nonbiological origin. Deposit at VINITI, no. 5895-81, 28 Dec 1981, 11 p. (DR, 4/82, 323)

357. Lipskaya, O.A., and V.V. Smirnov (0). Microstructure of surface boundary layer aerosols and their effect on optical scattering characteristics. Sb 18, 40 43.

358. Lipskaya, O.A., and A.F. Nerushev (220). Spectral dependence of the signal/noise ratio for various problems in detecting scattered laser radiation in the atmosphere. Tr 4, 99-106. (RZhF, 4/82, 4D1337)

359. Livshits, G.Sh., M.A. Nazaraliyev, and K.T. Nazarbekova (0). Evaluating the intensity of scattered radiation in a two-layer atmosphere. Sb 18, 117-120.

360. Lopatin, V.N., and F.Ya. Sid'ko (0). Resolution of an incident field using a vector-wave function. Sb 18, 26-27.

361. Loseva, T.V., and I.V. Nemchinov (276). Subsonic radiation waves in the atmosphere. KE, no. 3, 1982, 615-618.

362. Maksimyuk, V.S., M.V. Tantashev, and S.V. Tat'yanin (0). Study on the spatial structure of optical atmospheric characteristics over land. Sb 18, 52-55.

363. Malashin, M.S., and S.D. Pol'skikh (0). Accuracy of corrections of atmospheric phase distortions in an adaptive optical system. Sb 21, 45-49. (RZhRadiot, 3/82, 3Ye536

364. Mironov, N.T., and K.A. Bogatyrev (0). Computing the ephemerides of artificial satellites for observations by a first-generation laser rangefinder. Sb 22, 83-89. (TVKE, 30/82, 176

365. Mironov, V.L., and S.I. Tuzova (0). Huygens-Kirchhoff method for solving problems of optical propagation in two-phase media. Sb 18, 217-220.

366. Mironov, V.L., and S.I. Tuzova (0). Distortion of spatial coherence in an optical beam field in a medium with discrete large scale inhomogeneities. Sb 18, 221-224.

367. Mironov, V.L., and S.I. Tuzova (78). Destruction of the spatial coherence of an optical beam field in a two-phase medium. IVUZ Radiofiz, no. 3, 1982, 360-362.

368. Morozov, A.V., P.N. Svirkunov, and L.P. Semenov (220). Refraction of radiation in a cloud medium during dispersal. Tr 4, 3-8. (RZhF, 4/82, 4D1335)

369. Morozov, A.V., and P.N. Svirkunov (220). Problem of thermal self-action of intense laser beams propagating in aerodisperse media. Tr 4, 9-15. (RZhF, 4/82, 4D1330)

370. Moskalenko, N.I., S.Ya. Skvortsova, and V.F. Terzi (0). Modeling the optical characteristics of atmospheric aerosols over ocean areas. Sb 18, 56-59.

371. Naats, I.E. (0). Inverse problems in laser probing of atmospheric aerosols. Sb 20, 187-207.

372. Naku, I.M., and V.A. Chernobay (0). Comparative analysis of three methods for determining the attenuation of monochromatic radiation in various atmospheric layers. Sb 18, 133-136.

373. Panchenko, M.V., and V.Ya. Fadeyev (0). Statistical properties of the polarization index for coastal haze. Sb 18, 71-74.

374. Panchenko, M.V., and V.Ya. Fadeyev (0). Two-parameter model for the direction coefficient of optical scattering in coastal haze. Sb 18, 75-77.

375. Pinchuk, S.D. (220). Evaluation of various mechanisms of local heating of a cloud medium by a CO_2 laser beam. Tr 4, 53-59. (RZhF, 4/82, 4D1333)

376. Pkhalagov, Yu.A., L.M. Rogachevskaya, and V.N. Uzhegov (0). Some statistical characteristics in the variation of extinction coefficients in coastal haze. Sb 18, 94-96.

377. Pkhalagov, Yu.A., and V.N. Uzhegov (0). Applying two-factor regression analysis to the resolution of spectral extinction coefficients into components. Sb 18, 97-99.

378. Pkhalagov, Yu.A., and V.N. Uzhegov (0). Structure of the aerosol extinction coefficient for conditions of coastal haze. Sb 18, 148-150.

379. Remizovich, V.S., D.B. Rogozkin, and M.I. Ryazanov (0). Propagation of a narrow optical beam in a humid atmosphere and evaluation of fluctuations in photon path due to multiple scattering. Sb 18, 155-158.

380. Rogachevskiy, A.G. (0). Fluctuations of optical radiation in rain. Sb 19, 321-324. (RZhRadiot, 4/82, 4Ye416)

381. Rogachevskiy, A.G. (0). Limits to the coherence function for a dispersion medium. Sb 18, 215-216.

382. Semenov, L.P. (220). Dispersal of a cloud medium during vapor condensation. Tr 4, 16-21. (RZhF, 4/82, 4D1336)

383. Semenov, L.P., and A.G. Slesarev (220). Propagation of a pulse of optical radiation through a cloud medium under conditions of explosive destruction of droplets. Tr 4, 40-45. (RZhF, 4/82, 4D1332)

384. Sinchenko, V.G. (0). Transmission of information through a hazy atmosphere during holographic and photographic methods of recording. Sb 18, 247-250.

385. Tereshchenko, Ye.D., A.A. Popov, A.D. Tereshchenko, and B.Z. Khudukon (0). Radioholographic study on ionospheric inhomogeneities. Sb 23, 90-101.

386. Toropova, T.P., and O.D. Tokarev (0). Effect of humidity on the form of the scattering index and polarization of light in surface boundary layers. Sb 18, 67-70.

387. Uglanova, V.V. (0). Efficiency of optical signal storage during detection in normal background noise and pulsed interference. Sb 21, 64-68. (RZhRadiot, 3/82, 3Ye457)

388. Usachev, A.L. (0). Spatial distributions of intensity from a point diffuse illuminated object at the upper boundary of a cloud layer. Sb 18, 175-178.

389. Usachev, A.L. (0). Visibility of objects along oblique lines of sight through a cloud layer. Sb 18, 179-181.

390. Vereshchagin, V.G., and A.N. Ponyavina (0). Coherent scattering by systems of large optically soft particles. Sb 18, 240 243.

391. Vereshchagin, V.G., and V.V. Morozov (0). Effect of shape and polydispersion of particles on transmission by selectively scattering layers. Sb 18, 244-246.

392. Volkovitskiy, O.A., and A.M. Skripkin (220). Effect of the temperature of the medium and divergence of a CO_2 laser beam on the kinetics of dispersal. Tr 4, 120-126. (RZhF, 4/82, 4D1338)

393. Vorobey, N.P., A.P. Ivanov, F.P. Osipenko, A.P. Chaykovskiy, and V.N. Shcherbakov (0). Reconstruction of the parameters of atmospheric aerosols using data from spectral measurements of back scattering. Sb 18, 12-15.

394. Vorobey, N.P., F.P. Osipenko, I.S. Khutko, A.P. Chaykovskiy, and V.N. Shcherbakov (0). Study on the variability in the vertical profile for optical characteristics of tropospheric aerosols over the desert. Sb 18, 44-47.

395. Yanovitskiy, E.G. (0). Scattering of light in an inhomogeneous atmosphere. Sb 20, 36-54.

396. Yegorov, A.D., Ye.Ye. Rybakov, and V.D. Stepanenko (0). Possibility of lidar determination of the characteristics of cirrus clouds dependent on the probing conditions. Sb 19, 318-321. (RZhRadiot, 4/82, 4Ye561)

397. Zakharov, V.M., A.I. German, A.P. Tikhonov, and A.Ye. Tyabotov (0). Some results of lidar studies of cumulus clouds. Sb 19, 304-308. (RZhRadiot, 4/82, 4Ye563)

398. Zakharyan, M.V., M.A. Kolosov, A.A. Semenov, A.V. Sokolov, and L.S. Fedorova (0). Results of determining the microstructure of stratus clouds by measurement data of attenuated laser radiation. Sb 19, 301-304. (RZhRadiot, 4/82, 4Ye414)

399. Zel'dovich, B.Ya., A.V. Mamayev, N.F. Pilipetskiy, N.N. Shkunov, and N.B. Baranova (0). Recording wavefront distortions in speckle-inhomogeneous optical fields. Sb 18, 233-235.

400. Zuyev, V.Ye. (0). Use of lasers for operative monitoring of the state of the atmosphere. Otdeleniye vychislitel'noy matematiki AN SSSR. Preprint, no. 23, Moskva, VINITI, 1981, 21 p. (KL, 10/82, 8312)

401. Zvenigorodskiy, S.G., L.S. Ivlev, and A.I. Dem'yannikov (0). Comparison of some algorithms for computing the equation for transmission of solar radiation in an aerosol atmosphere, considering both multiple scattering and the albedo of underlying surfaces over broad spectral ranges. Sb 18, 197-199.

2. In Liquids

402. Budnik, A.P., and V.K. Mamonov (220). Experimental study on the propagation of an optical discharge wave in water. ZhTF, no. 3, 1982, 565-567.

403. Dunina, T.A., S.V. Yegerev, L.M. Lyamshev, K.A. Naugol'nykh, and A.Ye. Pashin (21). Hydrodynamic effects during optical breakdown in liquids. Akusticheskiy zhurnal, no. 2, 1982, 192-200.

404. Neuymin, G.G. (0). Optical characteristics of ocean water. Sb 20, 207-222.

3. Theory

405. Bykovskiy, Yu.A., Yu.Yu. Vaytkus, E.P. Gaubas, Yu.N. Kul'chin, V.L. Smirnov, and K.Yu. Yarashyunas (16). Study on diffraction of light waves in a planar waveguide by optically induced dynamic gratings. KE, no. 4, 1981, 676-681.

406. Bunkin, F.V., N.A. Kirichenko, and B.S. Luk'yanchuk (1). Propagation of laser radiation in a medium with chemically inert nonlinearity. KE, no. 4, 1982, 704-710.

407. Bol'shov, L.A., and V.P. Reshetin (0). Propagation of optical pulses during resonant two-photon absorption. KE, no. 3, 1982, 620-626.

408. Doktorov, Ye.V. (0). Associated linear problem for an equation of self-induced transparency. IAN B, no. 6, 1981, 88-97. (RZhF, 4/82, 4D1328)

409. Germogenova, T.A. (0). Development of numerical methods for solving the radiation transfer equation. Sb 20, 105-118.

410. Ivanov, A.P. (0). Interferometric methods for probing internal structures of dense scattering objects. Sb 20, 121-135.

411. Kirichenko, T.K., and A.L. Kopa-Ovdiyenko (71). Using a Fourier method in problems on the propagation of wave beams in nonlinear media. Institut prikladnoy matematiki AN SSSR. Preprint, no. 143, 1981, 30 p. (RZhF, 4/82, 4D1320)

412. Prishivalko, A.P., and V.A. Babenko (0). Basic trends in modern theory of scattering and absorption of radiation by individual particles. Sb 20, 7-22.

413. Raykh, M.E. (60). Theory on the propagation of light in periodic and continuous waveguide heterostructures. Institut fiziki AN AzSSR. Dissertation, 1980, 17 p. (KLDVAD, 3/82, 3591)

414. Romanova, L.M. (0). Problems in the theory of radiation transfer in horizontally inhomogeneous media. Sb 20, 55-67.

415. Rozenberg, G.V. (0). Spectral theory of a light field. Sb 20, 22-36.

416. Savel'yev, B.A., S.B. Mogil'nitskiy, and B.V. Goryachev (0). Transmission of luminous radiation in layered media. Sb 19, 324-327. (RZhRadiot, 4/82, 4Ye410)

417. Vereshchagin, V.G. (0). Scattering of radiation in media with high internal concentrations. Sb 20, 135-152.

418. Zege, E.P. (0). Engineering methods for analyzing light fields under multiple scattering conditions. Sb 20, 84-105.

D. COMPUTER TECHNOLOGY

419. Bentse, D. (75). Study on the quantitative characteristics and enhancement of coherent optical methods for information processing. Institut avtomatiki i elektrometrii SOAN. Dissertation, 1980, 10 p. (KLDVAD, 4/82, 5213)

420. Bessmel'tsev, V.P., I.S. Degtyarev, V.P. Koropkevich, V.D. Kosterin, G.I. Murzin, and Yu.N. Tkachuk (0). Laser typographic output device for computer information. Avtometriya, no. 2, 1982, 3-6.

421. Girnyk, V.I., V.N. Kurashov, and N.G. Nakhodkin (0). Use of digital holographic filters to optimize methods of coherent optical pattern recognition. Theory and computer simulation. OiS, v. 52, no. 3, 1982, 533-538.

422. Kibirev, S.F., S.I. Konyayev, and S.I. Naymark (0). Photomatrix associative accumulator. Avtometriya, no. 2, 1982, 13-19.

423. Konyashkin, V.V., M.K. Lutset, and B.S. Potapov (0). Film capacitance structures with an electrostatic drive for information display and light modulation devices. Sb 24, 54-63. (RZhRadiot, 3/82, 3Ye221)

424. Levin, G.G., and E.G. Semenov (0). Image processing device. Otkr izobr, no. 15, 1982, 922816.

425. Mikaelyan, A.L. (0). Radiooptic systems for information storage and processing using principles of holography. Radiotekhnika, no. 11, 1981, 6-24. (RZhRadiot, 3/82, 3Ye583)

426. Nagayev, A.I., V.N. Parygin, and S.Yu. Pashin (0). Using spatial optical modulators in information processing systems. Avtometriya, no. 2, 1982, 6-12.

427. Novoselets, M.K. (0). Functional description of optical systems consisting of thermoplastic and other nonlinear recording media. Sb 25, 99-114. (RZhF, 4/82, 4D1101)

428. Polikanin, A.M., B.A. Budkevich, and V.A. Pilipovich (299). Using bismuth chloride complexes to record optical information. ZhNiPFiK, no. 2, 1982, 104-107.

429. Soroka, S.I. (0). Analysis of the effect of the resonance transmitting characteristics of thermoplastic media on the recording density of digital information in a hologram. Sb 25, 6-14. (RZhRadiot, 4/82, 4D1100)

430. Tsvetkov, V.A. (0). Thermooptic effects in liquid crystals for information reproduction systems. Zarubezhnaya radioelektronika, no. 1, 1982, 43-62. (RZhRadiot, 4/82, 4Ye599)

431. Zaytsev, V.G., V.A. Zubov, and A.V. Krayskiy (1). Holographic memory for information with a periodic structure with the diffuser image in the hologram plane during recording. Tr 5, 106-126.

432. Zubov, V.A., A.V. Krayskiy, and T.T. Sultanov (1). Optical information processing by a birefringent interferometer system. Tr 5, 3-67.

E. HOLOGRAPHY

433. Angel'skiy, O.V., A.G. Ushenko, and V.V. Yatsenko (53). Effect of the degree of depolarization of an object field on the brightness of a reconstructed holographic image of scattering objects. UFZh, no. 3, 1982, 443-445.

434. Burykin, N.M., S.V. Volkov, V.I. Lutoshkin, and V.B. Taranenko (0). Study on the holographic characteristics and physical chemical properties of chromated gelatin layers. Sb 25, 65-73. (RZhF, 4/82, 4D1099)

435. Buymistryuk, G.Ya., and A.Ya. Dmitriyev (390). Selection of laser radiation wavelengths in the production of color holographic images. IVUZ Priboro, no. 3, 1982, 79-82.

436. Bykovskiy, Yu.A., A.I. Maymistov, A.V. Mironos, and V.L. Smirnov (16). Photosensitivity of glassy semiconductor chalcogenide layers during pulsed holographic recording. KE, no. 4, 1982, 786-788.

437. Gik, L.D. (0). Image reconstruction of limited sized objects with an inclined reflecting surface. Geologiya i geofizika, no. 11, 1981, 132-140. (RZhF, 3/82, 3D1061)

438. Gik, L.D. (0). Effect of random phase and amplitude inaccuracies on the image quality in acoustic holography. Avtometriya, no. 2, 1982, 30-35.

439. Gusev, V.D., and V.Ye. Kunitsyn (0). Recording holograms with frequency variation. RiE, no. 3, 1982, 409-415.

440. Klimenko, I.S., and S.N. Malov (0). Suppressing speckle noise in holographic images. OiS, v. 52, no. 4, 1982, 745-746.

441. Kolbasov, G.Ya., V.A. Sterligov, and A.V. Gorodyskiy (512). Characteristics of photoelectrochemical recording of holograms on CdS in iodide ion solutions. Elektrokhimiya, no. 2, 1982, 290-292.

442. Kreopalov, V.I., L.N. Neustroyev, and V.V. Osipov (0). Recording holograms by CCD's and reconstruction of the object image. Mikroelektronika, no. 2, 1982, 173-175.

443. Lipowiecki, T. (NS). Integral diffraction efficiency of amplitude holograms. Opt app, no. 2, 1981, 202-222. (RZhF, 4/82, 4D1094)

444. Mironos, A.V., A.I. Maymistov, and V.L. Smirnov (16). Analysis of recording of amplitude-phase holographic diffraction gratings on chalcogenide glass films. KE, no. 4, 1982, 777-779.

445. Morozov, N.V., Yu.I. Ostrovskiy (4). Holographic interferometry of rotating objects using a pulsed ruby laser. ZhTF, no. 3, 1982, 577-578.

446. Nowak, J., and M. Zajac (NS). Effect of the position of the entrance pupil on the hologram aberration correction. Opt app, no. 2, 1981, 285-293. (RZhF, 4/82, 4D1090)

447. Odulov, S.G., Yu.A. Reznikov, M.S. Soskin, and A.I. Khizhnyak (5). Polarization recording of dynamic holographic gratings in mesophase methoxybenzilidene butylanylin crystals. DAN SSSR, v. 263, no. 3, 1982, 598-601.

448. Pancheva, M., and A. Katsev (NS). Bichromatic colloids. Properties and applications in holography. Sb 26, 17-26. (RZhF, 4/82, 4D1097)

449. Pronyushkin, V.I., and Yu.V. Pyl'nov (0). Effect of the spectrum of the probing signal on the quality of the image in acoustic holography. Sb 27, 43-48. (RZhF, 4/82, 4Zh755)

450. Pryakhin, Yu.A. (7). Study on the recording of Fourier holograms in photothermoplastic layers. Gosudarstvennyy opticheskiy institut. Dissertation, 1980, 19 p. (KLDVAD, 4/82, 5283)

451. Roslyakov, S.N. (53). Feasibility of using holograms without reference beams in interferometry. UFZh, no. 3, 1982, 445-446.

452. Shakirov, A.Kh. (231). Experimental study on the efficiency of superposed holograms. TKiT, no. 3, 1982, 40-42.

453. Suynov, S.Kh., and M.Yu. Mazakova (Bulgarians). Using attenuated waves for holographic recording of three-dimensional objects. ZhNiPFiK, no. 2, 1982, 96-99.

454. Tanetova, N.P. (231). Optical and electron microscopic study on materials for cineholography. ZhNiPFiK, no. 2, 1982, 89-92.

455. Vasil'yev, M.V., and V.G. Sidorovich (0). Evaluating angular and spectral selectivity of hypersonic reflection holograms. ZhTF, no. 3, 1982, 504-510.

456. Vinnik, D.M., K.K. Trofimovich, and V.A. Kayushkin (0). Possibility of recording phase holograms on $(As_2S_3)_{1-x}(Sb_2S_3)_x$ films. Sb 10, 228. (RZhRadiot, 3/82, 3Ye555)

457. Voyevodin, A.A., V.L. Kazak, and I.M. Nagibina (30). Combined methods of holographic interferometry. IVUZ Priboro, no. 3, 1982, 75-7[illegible].

F. LASER-INDUCED CHEMICAL REACTIONS

458. Abdushelishvili, G.I., O.N. Avatkov, V.N. Bagratashvili, V.Yu. Baranov, A.B. Bakhtadze, Ye.P. Velikhov, V.M. Vetsko, I.G. Gverdtsiteli, V.S. Dolzhikov, G.G. Yesadze, S.A. Kazakov, Yu.R. Kolomiyskiy, V.S. Letokhov, S.V. Pigul'skiy, V.D. Pis'mennyy, Ye.A. Ryabov, and G.I. Tkeshelashvili (72). Isotope separation by multiphoton dissociation of molecules using high-power CO_2 laser radiation. Scaling processes for carbon isotopes. KE, no. 4, 1982, 743-759.

459. Akulin, V.M., S.S. Alimpiyev, N.V. Karlov, and A.M. Prokhorov (1). Feasibility of selectively breaking chemical bonds in polyatomic molecules by a laser field. DAN SSSR, v. 263, no. 6, 1982, 1336-1339.

460. Aleksandrov, Ye.I., and V.P. Tsipilev (0). Effect of extrusion pressure on the sensitivity of lead azide to laser radiation. FGiV, no. 2, 1982, 100-103.

461. Alimpiyev, S.S., S.I. Valyanskiy, S.M. Nikiforov, V.V. Smirnov, B.G. Sartakov, V.I. Fabelinskiy, and A.L. Shtarkov (1). Direct observation of vibrational states in SF molecules excited by a resonant IR field using a CARS method. ZhETF P, v. 35, no. 7, 1982, 291-294.

462. Darznek, S.A., M.M. Zverev, and S.P. Kopyt (626). Resonant stepped ionization of iodine molecules. KE, no. 4, 1982, 785-786.

463. Kolobov, A.V., B.T. Kolomiyets, V.M. Lyubin, N. Sebastian (East German), M.A. Tagirdzhanov, and J. Hajto (Hungarian, Russ transliteration: Ya. Khayto) (0). Optically induced processes in glassy arsenic and germanium chalcogenides. FTT, no. 4, 1982, 1062-1067.

464. Kolomiyskiy, Yu.R. (445). Study on multiphoton dissociation of SF_6 molecules in an IR laser field as applied to the problem of laser isotope separation. VNII metrologicheskoy sluzhby. Dissertation, 1980, 15 p. (KLDVAD, 4/82, 5248)

465. Kuz'menko, V.A. (23). Study on the kinetics and mechanism of various chemical reactions initiated by CO_2 laser radiation. Institut atomnoy energii. Dissertation, 1980, 18 p. (KLDVAD, 3/82, 3660)

466. Letokhov, V.S. (1). Gas photoionization method using laser radiation. Otkr izobr, no. 18, 1982, 784679.

467. Leypunskiy, I.O., A.K. Lyubimova, A.A. Nadeykin, A.I. Nikitin, and V.L. Tal'roze (67). Study on the process of forming products that contain oxygen during multiphoton dissociation of SF_6 by high-power CO_2 laser radiation. KE, no. 4, 1982, 668-676.

468. Matyuk, V.M., A.V. Polevoy, V.K. Potapov, and A.L. Prokhoda (122). Stepped photoionization of aromatic aldehyde and ketone vapors produced by $\pi\pi^*$-electron excitation of molecules. KhVE, no. 2, 1982, 99-103.

469. Mikhaylov, Yu.T., and V.V. Ryl'kov (0). Cooperative and stepped optical processes in rhodamine solutions. ZhPS, v. 36, no. 3, 1982, 445-451.

470. Nikonorov, A.P. (2). Interaction of pulsed CO_2 laser radiation with boron trichloride molecules. Visible luminescence and spectrum analysis of the dissociation products. Moskovskiy GU. Dissertation, 1981, 19 p. (KLDVAD, 3/82, 3668)

471. Sazonov, V.N. (1). Effect of a permanent magnetic field on multiphoton dissociation of polyatomic molecules during collisions. KSpF, no. 4, 1982, 8-11.

472. Sazonov, V.N. (1). Initiation of chemical reactions by micro-fluctuations in the temperature of a medium while absorbing laser radiation. ZhETF, v. 82, no. 4, 1982, 1092-1095.

473. Yermakov, V.A., A.A. Razdobreyev, A.I. Skorik, V.V. Pozdeyev, and S.S. Smolyakov (0). Temperature of aluminum particles at the moment of ignition and combustion. FGiV, no. 2, 1982, 141-143.

G. MEASUREMENT OF LASER PARAMETERS

474. Atroshchenko, L.I., I.N. Govor, and A.V. Kubarev (0). Increasing the measuring range of an OIM-1 device to 10.6 μm. IT, no. 4, 1982, 37-38.

475. Bakhir, L.P., Yu.M. Belyakov, V.V. Yelov, A.V. Yevlampiyev, G.I. Levashenko, and V.V. Tamanovich (0). Determination of the active medium parameters of CO_2 flow lasers by infrared spectroscopy. Sb 4, 963-964. (RZhF, 4/82, 4G554)

476. Bardyukov, A.M., M.E. Berg, and M.Ya. Varshavskiy (0). Method for determining the space-time characteristics of coherent optical radiation. Author's certificate USSR, no. 683483, 30 April 1981. (RZhRadiot, 4/82, 4Ye422)

477. Bardyukov, A.M., M.E. Berg, L.S. Kremenchugskiy, V.I. Kukhtevich, and S.K. Sklyarenko (0). Device for determining the space-time characteristics of coherent optical radiation. Author's certificate USSR, no. 692467, 30 Apr 1981. (RZhMetrolog, 4/82, 4.32.1140)

478. Bukhshtab, M.A., and A.A. Vol'kenshteyn (0). Contemporary pulsed photometry. Svetotekhnika, no. 2, 1982, 10-13.

479. Gronowska, I., and B. Madejczyk (NS). Device for determining the position of a laser beam. Patent Poland, no. 104818, 30 Dec 1980. (RZhRadiot, 4/82, 4Ye582)

480. Kedo, V.V., N.N. Temnikov, and B.I. Utenkov (7). Measuring the spatial energy characteristics of pulsed radiation sources in the far field. OMP, no. 4, 1982, 35-36.

481. Kislov, V.V., O.F. Mikhal', and I.S. Oleynik (0). Device for radiation power stabilization. Author's certificate USSR, no. 842749, 30 June 1981. (RZhRadiot, 4/82, 4Ye140)

482. Knyazev, B.A., and S.V. Lebedev (79). Method for operative control of the spatial distribution of the energy density for pulsed laser radiation. PTE, no. 2, 1982, 169-171.

483. Kononchuk, G.L., and V.M. Baran (51). Noise rejection in a laser power stabilization system. Tr 6, 20-23. (TVKE, 29/82, 685)

484. Krylov, P.S., and V.Ye. Privalov (0). Development of devices for studying stabilized He-Ne lasers. Sb 28, 24-25. (TVKE, 29/82, 670)

485. Kuchinskiy, V.V., and I. Sh. Etsin (0). Limits to precision in interference measurements of wavelengths. OiS, v. 52, no. 3, 1982, 385-387.

486. Maciejewski, A., and J. Wojtczak (NS). Method for measuring the energy and power of laser radiation and the calibration of measuring instruments of these values. Patent Poland, no. 108584, 29 Nov 1980. (RZhRadiot, 4/82, 4Ye420)

487. Ragul'skiy, V.V. (17). Device for studying the energy distribution in the cross-section of a light beam. Author's certificate USSR, no. 824105, 25 April 1981. (RZhRadiot, 4/82, 4Ye421)

488. Semenov, S.V., and V.I. Khutorshchikov (0). Method for measuring partial pressures in a gas mixture. Author's certificate USSR, no. 813191, 17 March 1981. (RZhRadiot, 4/82, 4Ye431)

489. Skorobogatov, B.S., A.I. Usoskin, and Zh.I. Klitsova (188). Immersion method for measuring the coefficient of reflection of the ends of laser rods. Tr 3, 6-9. (RZhF, 3/82, 3D1020)

490. Solov'yev, V.S., and N.S. Fertik (0). Measuring the characteristics of frequency instability of laser radiation. Sb 29, 76-78. (RZhRadiot, 3/82, 3Ye439)

491. Urbankova, H., M. Chvojka, and J. Skala (NS). Systematic experimental study on instabilities in a sealed-off CO_2 laser. CJP, v. B31, no. 10, 1981, 1070-1083. (RZhF, 3/82, 3D1286)

492. Volchenok, V.I., V.N. Komarov, S.Ye. Kupriyanov, V.I. Stukanog, V.N. Ochkin, and N.N. Sobolev (0). Spatial inhomogeneity of the chemical composition in sealed-off CO_2 laser plasmas. Sb 4, 873-874. (RZhF, 4/82, 4G553)

493. Volkov, S.Yu., V.I. Pelipenko, and V.V. Smirnov (1). Automatic device for measuring the wavelength of laser radiation by a Fizeau interferometer. KE, no. 3, 1982, 620-622.

494. Yepishin, V.A., and M.V. Neofitnyy (34). Diffraction coupler for measuring the characteristics of laser radiation. KE, no. 4, 1982, 718-725.

495. Yevtikhiyev, N.N., O.S. Yesikov, and N.A. Toloknov (16). Signal spectrum analyzer. Author's certificate USSR, no. 817661, 30 March 1981. (RZhRadiot, 4/82, 4Ye428)

496. Zakharenko, Yu.G., A.V. Kotkov, and N.A. Mel'nikov (0). Prototype device for frequency reproduction and lock-on in 0.633 μm lasers. IT, no. 3, 1982, 35-36.

497. Zhoglikov, V.A., and B.V. Kiyashko (8). Control unit for a phase modulated beam for a multichannel optical spectrum analyzer. Author's certificate USSR, no. 809025, 28 Feb 1981. (RZhRadiot, 4/82, 4Ye429)

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

498. Afanas'yeva, V.L., B.N. Bardin, S.O. Mirumyants, Yu.S. Nagulin, N.K. Pavlycheva, V.A. Seleznev, and Ye.A. Trushko (7). Small-scale spectrograph with concave holographic gratings. OMP, no. 4, 1982, 21-23.

499. Ageyev, V.A., A.T. Gradyushko, S.G. Komissarov, A.R. Moroz, G.A. Panyutin, Yu.V. Khlopkov, I.F. Yazychenko, and V.M. Bratkovskiy (587). Method for determining the thickness of a coating. Author's certificate USSR, no. 815485, 23 March 1981. (RZhRadiot, 4/82, 4Ye492)

500. Alayli, Y. (0). Thomson and Rayleigh scattering in sulfur hexafluoride. Sb 4, 949-950. (RZhF, 4/82, 4G503)

501. Aleksandrov, V.Ya., I.P. Borodin, Ye.V. Kichenko, and I.V. Podmoshenskiy (0). Fast coagulation of submicron aerosols in a three-dimensional whisker structure. ZhTF, no. 4, 1982, 818-820.

502. Aleksandrov, Ye.B., and V.S. Zapasskiy (0). New possibilities for studying electron paramagnetic resonance using laser polarimetry technology. IAN Fiz, no. 3, 1982, 423-428.

503. Alkhimov, A.P., N.I. Nesterovich, and A.N. Papyrin (0). Experimental study on the pattern of flow around an object in a supersonic two-phase flow. ZhPMTF, no. 2, 1982, 66-74.

504. Andrushchak, Ye.A., S.A. Vilkov, I.N. Mazalov, and V.P. Tychinskiy (0). Laser interferometric instrument for measuring the spectra of complex mechanical vibrations. Sb 30, 94-95. (TVKE, 30/82, 106)

505. Angel'skiy, O.V., V.V. Tarnovetskiy, and V.V. Yatsenko (53). Determining the rms velocity for Brownian particles by a holographic method. UFZh, no. 4, 1982, 513-516.

506. Artyukh, Yu.N. (0). Using chronography to measure the parameters of single-signal laser Doppler velocimeters. Sb 31, pp not given. (TVKE, 30/82, 161)

507. Atutov, S.N., S.S. Bednarzhevskiy, E.G. Saprykin, and G.I. Smirnov (0). Method and apparatus for laser nephelometry of milk. Metrologiya, no. 3, 1982, 56-61.

508. Auslender, A.L., G.N. Vishnyakov, and G.G. Levin (0). Device for measuring the spatial distribution of optical inhomogeneities of objects. Author's certificate USSR, no. 789679, 25 Dec 1980. (RZhRadiot, 4/82, 4Ye630)

509. Bakirov, F.G., I.Kh. Bashirov, V.M. Zakharov, I.Z. Poleshchuk, and Z.G. Shaykhutdinov (0). Development of a method for experimentally studying the production of carbon in combustion processes for homogeneous mixtures at pressures up to 2 MPa. FGiV, no. 2, 1982, 143-145.

510. Bakos, J., and Zs. Sorlei (NS). Plasma diagnostics by laser. FM, no. 10, 1981, 289-293,304,320. (RZhRadiot, 3/82, 3Ye515)

511. Baksht, R.B., B.A. Kablambayev, and N.A. Ratachin (0). Physical processes in a nanosecond vacuum spark. Sb 4, 567-568. (RZhF, 3/82, 3G576)

512. Bardinov, A.A., V.A. Burtsev, V.A. Kubasov, V.N. Litunovskiy, and B.V. Lyublin (0). Diagnostic setup for simultaneous study of coherent and non-coherent laser scattering in a fast theta-pinch. Sb 4, 965-966. (RZhF, 3/82, 3G655)

513. Barkalov, A.D., and G.G. Gladush (0). Theory and calculation of the air discharge stratification at medium pressures. Sb 4, 679-680. (RZhF, 4/82, 4G371)

514. Batenin, V.M., I.A. Vasil'yeva, and V.F. Kosov (74). Study on boundary layers in an MHD plasma using electrical probing. TVT, no. 2, 1982, 229-235.

515. Belousov, P.Ya., Yu.N. Dubnishchev, and I.G. Pal'chikova (0). Optical discrimination of the Doppler frequency shift in laser anemometry. Sb 31, pp not given. (TVKE, 30/82, 161)

516. Belyayev, V.P., V.V. Zubov, M.A. Lesnoy, N.A. Lyabin, A.D. Chursin, and O.D. Vorob'yev (0). Using active elements of pulsed copper vapor lasers in industrial equipment for monitoring electronic products. Sb 1, 82-83. (TVKE, 30/82, 354)

517. Berezhnyy, V.L., V.I. Kononenko, I.K. Nikol'skiy, and O.S. Pavlichenko (0). Submillimeter laser interferometer with beam scanning. Sb 32, 149-154. (RZhF, 3/82, 3G649)

518. Berezin, A.B., V.A. Burtsev, and V.G. Smirnov (0). Study on a turbulent dense plasma using the coherence change of the probing laser radiation. Sb 4, 967-968. (RZhF, 3/82, 3G342)

519. Bespal'ko, V.A. (669). Research and development of high-speed automated systems for signal conversion in laser anemometry. Institut elektroniki i vychislitel'noy tekhniki AN LatSSR. Dissertation, 1980, 22 p. (KLDVAD, 4/82, 5585)

520. Besshaposhnikov, A.A., V.B. Voronin, A.G. Kalygin, Ya.N. Laukhin, N.A. Sokolov, and V.N. Cherepanov (0). Multichannel optical image recording system for high-temperature plasma diagnostics. Sb 32, 16-20. (RZhF, 3/82, 3G682)

521. Blokh, M.A., G.S. Voronov, N.P. Donskaya, N.F. Larionova, N.V. Lunin, I.S. Sbitnikova, M.S. Rabinovich, Yu.V. Khol'nov, A.V. Khudoleyev, and I.S. Shpigel' (1). Interaction of a solid hydrogen pellet and plasma in an L-2 stellerator. Fizika plazmy, no. 2, 1982, 249-254.

522. Boetticher, W., B.H. Mueller, and J.M. Schneider (NS). Non-ideality effects in shock-heated krypton measured by infrared continuum absorption. Sb 5, 325-336. (RZhF, 3/82, 3G206)

523. Bogdanov, S.Yu., G.V. Dreyden, A.G. Frank, A.Z. Khodzhayev, I.I. Komissarova, V.S. Markov, G.V. Ostrovskaya, Yu.I. Ostrovskiy, V.N. Filippov, and Ye.N. Shedova (0). Cineholographic study of the electron density redistribution in the process of explosive disruption of the current sheet. Sb 4, 973-974. (RZhF, 4/82, 4G506)

524. Bogomolov, N.F., V.A. Svirid, S.N. Khotyaintsev, and L.K. Yarovoy (0). Multichannel fiber optic laser Doppler velocimeters for studying turbulent flows. Sb 31, pp not given. (TVKE, 30/82, 161)

525. Borisevich, N.A., V.V. Gurzinskiy, and V.A. Suchkov (0). Laser diagnostics of complex molecule vapors in a pulsing electric discharge. Sb 4, 969-970. (RZhF, 4/82, 4G498)

526. Borkova, V.N., V.A. Zubov, and A.V. Krayskiy (1). Holographic recording of time-variable optical signals in systems with a transient reference wave. Tr 5, 68-105.

527. Burakov, V.S., M.M. Larionov, P.Ya. Misakov, P.A. Naumenkov, S.V. Nechayev, G.T. Razdobarin, V.V. Semenov, L.V. Sokolova, and R.P. Folomkin (0). Experiments on resonance fluorescence at the H_α line in a Tokamak FT-1 plasma. Sb 32, 74-78. (RZhF, 3/82, 3G648)

528. Burdonskiy, I.N., Ye.V. Zhuzhukalo, A.N. Kolomiyskiy, V.N. Kondrashov, and M.I. Pergament (0). Holographic interferometry of dense plasma objects. Sb 32, 83-91. (RZhF, 3/82, 3G650)

529. Burmakov, A.P., V.A. Zaykov, A.V. Kolesnik, A.A. Labuda, V.B. Mikhaylov, and G.M. Novik (0). Structure, parameters and dynamics of pulsed high-speed plasma flows in interaction with a solid surface. Sb 5, 473-474. (RZhF, 4/82, 4G420)

530. Chebotayev, V.P., S.N. Bagayev, A.S. Dychkov, V.G. Gol'dort, V.M. Klement'yev, Yu.A. Matyugin, M.V. Nikitin, Yu.Ya. Pecherskiy, and A.Yu. Gusev (159). A combined time and length standard. KE, no. 3, 1982, 453-462.

531. Danil'chuk, N.V., O.G. Sokolova, and V.N. Shapovalov (7). Device for measuring the scattering index for the side surface of active elements. OMP, no. 4, 1982, 23-25.

532. Dement'yev, V.Ye. (0). Determining vertical refraction by fluctuations in the angle of incidence for an optical beam. KE, no. 4, 1982, 789-790.

533. Dem'yanov, A.V., I.V. Kochetov, A.P. Napartovich, V.G. Pevgov, and A.N. Starostin (0). Determining the vibrational velocities in highly excited molecules. KhVE, no. 2, 1982, 161-167.

534. Dianov, Ye.M., L.S. Korniyenko, Ye.P. Nikitin, A.O. Rybaltovskiy, and P.V. Chernov (98,1). Radiation color centers in fiber optics with pure quartz glass cores. FiKhS, no. 2, 1982, 192-199.

535. Dontsov, Yu.P., Yu.A. Zavenyagin, and L.N. Knyazev (0). Increasing the contrast from the apparatus function of a Fabry-Perot interferometer. ZhPS, v. 36, no. 4, 1982, 687-689.

536. Dubnishchev, Yu.N., F.A. Zhuravel', and V.A. Pavlov (0). Laser anemometers with suppression of phase noise in the Doppler signal. Sb 31, pp not given. (TVKE, 30/82, 161)

537. Dugin, V.P., M.V. Kabanov, O.B. Samarin, Yu.G. Toporkov, and G.S. Khmel'nitskiy (78). Optoacoustic study on the absorption coefficient of aerosols extracted from the soil in the 9-11 μm spectral region. IVUZ Fiz, no. 4, 1982, 6-10.

538. D'yakova, Yu.G., Z.A. Lukin, and M.F. Stel'makh (0). Current status and prospects for using lasers in the national economy. Sb 1, 3-9. (TVKE, 30/82, 359)

539. Fedosov, A.A., N.V. Uzhov, and V.Ye. Tsybrov (0). Measuring linear acceleration of fast-flow processes. IT, no. 3, 1982, 42-43.

540. Golubovskiy, Yu.B., and V.M. Telezhko (0). Investigation of a glow discharge in nitrogen by holographic interferometry. Sb 4, 983-984. (RZhF, 4/82, 4G368)

541. Gorodetskiy, A.Ye., N.N. Lyashenko, P.P. Kuz'min, and E.D. Pankov (30,667,668). Optical displacement transducer. Otkr izobr, no. 17, 1982, 926530.

542. Gusev, V.V., and B.N. Poyzner (47). Method for holographic monitoring of a doubly exposed three-dimensional phase object. Author's certificate USSR, no. 838321, 18 June 1981. (RZhRadiot, 4/82, 4Ye637)

543. Heinrichs, W., H. Knoth, W. Lange, H. Schaefer, and G. Herz (NS). Device for error avoidance in measuring by alignment beam. Patent GDR, no. 149128, 24 June 1981. (RZhRadiot, 4/82, 4Ye481)

544. Itigin, A.M., and T.N. Khatsevich (0). Optical system for a laser image recorder. Avtometriya, no. 2, 1982, 108-110.

545. Kaner, V.V., L.N. Lakhin, and R.Yu. Orlov (2). Determining the size of coarse-dispersion system particles by optical scattering. VMU Seriya geologiya, no. 2, 1982, 45-49.

546. Kondratov, V.A., and A.M. Zhidovikov (0). Laser dilatometric device for measuring the temperature coefficient of linear expansion of slightly expanding materials in the -60 to +100° C temperature range. Sb 33, 38-40. (TVKE, 30/82, 893)

547. Kosarev, I.I., V.F. Moskalenko, and V.A. Stepanov (0). Use of gas-discharge lasers in microelectronics. Sb 1, 56-60. (TVKE, 30/82, 356)

548. Koval'skiy, V.N. (395). Device for materials testing using shock compression. Otkr izobr, no. 15, 1982, 922581.

549. Kreytus, I.V., V.A. Benderskiy, Yu.Ye. Tiliks, and A.G. Krivenko (109). Measuring the rate constant for recombination of hydrated electrons in concentrated solutions of electrolytes using pulsed photoelectric emission. KhVE, no. 2, 1982, 107-111.

550. Kreytus, I.V., V.A. Benderskiy, V.M. Beskrovnyy, and Yu.Ye. Tiliks (109). Length of thermalization of low-energy electrons in concentrated aqueous solutions of electrolytes. KhVE, no. 2, 1982, 112-116.

551. Kulikovskaya, N.I., and V.L. Kabanova (0). Telescopic system. Otkr izobr, no. 14, 1982, 920613.

552. Kulyshev, A.V., U.O. Myagi, Ye.V. Moym, A.Z. Rozenshteyn, R.F. Rannamaa, and I.N. Shcheglov (0). Two-component laser Doppler velocimeter for diagnostics of disperse flows. Sb 6, 143-145.

553. Kurashov, V.N., and Yu.V. Khoroshkov (0). Interferometric method for producing images of objects using randomly coherent radiation. OiS, v. 52, no. 3, 1982, 526-532.

554. Kuznetsov, V.M., V.S. Rubanov, and L.P. Svirina (0). Light-induced optical decoupling in a gas ring laser. ZhPS, v. 36, no. 3, 1982, 383-388.

555. Ledneva, G.P., Yu.I. Chekalinskaya, and Ye.P. Chechenina (0). Amplification of polarized c-w and pulsed signals in a traveling-wave regenerative laser amplifier with a Faraday cell. ZhPS, v. 36, no. 3, 1982, 416-422.

556. Lisyanskiy, B.Ye., P.A. Morozov, and S.P. Morozova (0). Controlling optical homogeneity of materials in the IR spectral region. IT, no. 4, 1982, 36-37.

557. Logozinskiy, V.N., and A.G. Novikov (0). Optimization of the parameters of a fiber ring interferometer. KE, no. 4, 1982, 775-777.

558. Luk'yanov, D.P., P.V. Melekhov, Yu.V. Filatov, and S.A. Shcherbakov (110). Device for marking angular scales. Otkr izobr, no. 13, 1982, 918785.

559. Malykh, N.I., A.G. Nagornyy, and Ye.S. Yampol'skiy (0). Submillimeter interferometer with high phase sensitivity. Sb 32, 157-161. (RZhF, 3/82, 3G651)

560. Mamedov, R.K., G.M. Mansurov, and N.I. Dubovikov (7). Optical spall constant for quartz glass in the IR region. OMP, no. 4, 1982, 56-58.

561. Masalov, A.V. (1). Dynamic holography in a method for measuring the relaxation time of media. Tr 5, 127-148.

562. Matous, J. (NS). Instrument for determining the inclination of an object. Author's certificate Czechoslovakia, no. 187155, 15 March 1981. (RZhRadiot, 4/82, 4Ye473)

563. Miteva, M.G. (0). Measuring parasitic optical scattering by holographic transmission diffraction gratings. ZhPS, v. 36, no. 3, 1982, 510-512.

564. Motuz, A.N., V.V. Popov, and A.K. Polonin (0). Interference translator of linear motion. PSU, no. 4, 1982, 27-28.

565. Myuller, G., R. Pil'ts, and G. Shchornak (52). Determining the beam trajectory in trihedral corner reflectors of a laser interferometer. Ob"yedinennyy institut yadernykh issledovaniy. Soobshcheniye, no. R13-81-398, Dubna, 1981, 8 p. (KL, 17/82, 14237)

566. Nicolau-Rebigan, S., and V. Vasiliu (NS). Methods for improving the sensitivity of holographic interferometry. SCF, no. 9, 1981, 935-952. (RZhF, 4/82, 4D1095)

567. Novikovskiy, Ye., L. Yakubovskiy, G.V. Zelenin, and P.G. Krishtal' (0). Comparative measurement of the electron temperature of a plasma by laser scattering and by soft x-ray absorption. Sb 32, 20-24. (RZhF, 3/82, 3G654)

568. Pavlova, N.N., V.D. Berger, V. Dzhazairov-Kakhramanov, A.A. Yesipov, V.G. Kruglov, and A.V. Yushkov (0). Laser alignment of experimental devices to an accelerator ion conductor. Sb 34, 498.

569. Polonin, A.K., and N.T. Kvasov (0). Using holographic methods to analyze the statistical stressed state of objects for nondestructive control. Defektoskopiya, no. 12, 1981, 59-66. (RZhRadiot, 4/82, 4Ye639)

570. Poponin, V.P., L.N. Pyatnitskiy, and N.P. Shternov (0). Polarization and spectrum of light scattered by unmagnetized relativistic e-beams. Sb 4, 1013-1014. (RZhF, 4/82, 4G505)

571. Popov, A.P., and G.I. Lashkov (0). Interference method for studying the kinetics of photochemical processes. TiEKh, no. 2, 1982, 249-252.

572. Posudin, Yu.I. (0). Using a laser for practical applications in optics. Sb 35, 80-83. (RZhF, 4/82, 4A94)

573. Presnyakov, G.S., V.Ya. Eydinov, and V.Ya. Barash (0). Heterodyne interferometer using a two-mode laser. Sb 36, 62-70. (RZhMetrolog, 4/82, 4.32.1185)

574. Privalov, V.Ye. (0). Effect of perturbations on the precision characteristics of a ring gas laser. Sb 28, 22-24. (TVKE, 29/82, 595)

575. Puryayev, D.T., and N.L. Lazareva (7). Interferometer for controlling the shape of concave spherical surfaces. OMP, no. 3, 1982, 22-24.

576. Pyatnitskiy, L.N., V.A. Fonkin, and G.G. Yakushev (0). High-sensitivity laser interferometer for the study of plasmas. Sb 4, 1019-1020. (RZhF, 4/82, 4G501)

577. Razdobarin, G.T., and D.A. Shcheglov (0). Using a laser scattering method for plasma diagnostics. Sb 32, 6-15. (RZhF, 3/82, 3G647)

578. Rinkevichyus, B.S., and V.I. Smirnov (0). Sampling the spatial resolution of a laser anemometer, for example, a plane Couette flow. Analysis of the spatial resolution of a laser anemometer for studying turbulence. Sb 31, pp not given. (TVKE, 30/82, 161)

579. Rozenshteyn, A.Z. (0). Problems in laser Doppler anemometry of gas--solid particle flows. Sb 6, 136-142.

580. Samartsev, V.V. (38). Current status of experimental studies on resonant media using light echo. IAN Fiz, no. 3, 1982, 524-537.

581. Sapozhnikov, Ya.M., N.Ya. Ravin, E.M. Trakhanov, and N.A. Tolstova (0). Device for producing reference planes and markings. Otkr izobr, no. 15, 1982, 922509.

582. Sardyko, V.I., and A.Ya. Smirnov (0). Using circular dichroism to produce unidirectional lasing in ring lasers. OiS, v. 52, no. 4, 1982, 713-718.

583. Schejbal, V., and V. Kovarik (NS). Accuracy of near-field antenna measurement using holography. TESLA electronics, no. 2, 1981, 48-52,34. (RZhRadiot, 3/82, 3Ye570)

584. Sergeyeva, A.I. (0). Interference method for measuring the depth of transparent dielectric films. IT, no. 4, 1982, 27-28.

585. Shcheglov, I.N. (0). Acoustooptic device for shifting the frequency of a laser beam in a laser Doppler velocimeter. Sb 6, 146-150.

586. Shpak, I.V., I.M. Kuznetsov, and V.I. Kuz'menko (0). Amplitude characteristics of radiation from a nonsteady-state doubly isotopic gas ring laser. OiS, v. 52, no. 3, 1982, 398-399.

587. Shur, V.L. (163). Research and development of dual-beam interferometers with a large difference in the ray path and electrooptic modulation for linear measurements. VNII metrologii. Dissertation, 1980, 23 p. (TVKE, 29/82, 774)

588. Smirnov, V.I., and A.S. Timofeyev (0). Two-channel laser anemometer for studying the spatial structure of turbulence. Sb 31, pp not given. (TVKE, 30/82, 161)

589. Snezhko, Yu.A. (0). Application of control theory to increasing the precision of calculating surface inhomogeneities. ZhNiPFiK, no. 2, 1982, 93-96.

590. Sobolev, V.S. (0). Potential possibilities for laser Doppler anemometry. Sb 31, pp not given. (TVKE, 30/82, 161)

591. Timmermans, C.J., P.H.J. Schellekens, G.M.W. Kroesen, and D.C. Schram (NS). A phase quadrature feedback interferometer with a frequency stabilized two mode He-Ne laser. Sb 4, 1025-1026. (RZhF, 4/82, 4G502)

592. Tolstolutskiy, A.G., I.M. Zolototrubov, V.G. Zykov, Yu.M. Novikov, and V.S. Demin (82). Study on the mechanism of x-ray and neutron generation from the plasma focus of a pulsed coaxial accelerator. Fizika plazmy, no. 2, 1982, 255-261.

593. Urbanczyk, W., and I. Wilk (NS). Wide-range measurements of transversal shifts and rotations by a free-propagation speckle interferometry method. Opt app, no. 2, 1981, 295-306. (RZhF, 4/82, 4D961)

594. Vanyurikhin, A.I., V.Yu. Demchuk, I.I. Zaytsev, S.V. Tyutyun, and S.A. Shcherbakov (0). Automated goniometer. Otkr izobr, no. 17, 1982, 926532.

595. Voyevodin, A.A., V.L. Kazak, and I.M. Nagibina (30). Decoding of holographic interferograms during measurements of surface deformation. ZhTF, no. 4, 1982, 703-708.

596. Voytenko, I.G., and V.P. Red'ko (3). Logical comparison circuit based on an integrated optical interferometer. ZhTF, no. 4, 1982, 775-777.

597. Yasinskiy, V.M. (3). Method and device for measuring optical phase anisotropy. Otkr izobr, no. 12, 1982, 788923.

598. Yevseyev, A.R., and V.A. Orlov (0). Laser Doppler anemometry with lightguides. Sb 31, pp not given. (TVKE, 30/82, 161)

599. Zakharov, S.M., A.A. Kolomenskiy, S.A. Pikuz, A.I. Samokhin, I.Yu. Skobelev, and A.Ya. Fayenov (0). Exploded-wire plasma density measurements by relative intensities of resonance line satellites of hydrogen-like ions. Sb 14, 1029-1030. (RZhF, 4/82, 4G495)

600. Zastrogin, Yu.F. (0). Multichannel polarization interferometers. IT, no. 4, 1982, 28-33.

601. Zelenov, L.A., R.F. Kurunov, V.K. Ratkevich, and V.G. Smirnov (0). Use of holographic methods to study the active medium of a laser. Sb 4, 1033-1034. (RZhF, 4/82, 4G507)

602. Zwick, U. (NS). Measuring of glass fibers. Nachrichtentechnik-Elektronik, no. 10, 1981, 393-394. (RZhRadiot, 3/82, 3Ye240)

2. Laser-Excited Optical Effects

603. Abdullayev, G.B., A.G. Kyazym-zade, V.I. Tagirov, V.M. Salmanov, M.M. Panakhov, and Kh.A. Asadov (86). Effect of disordering of structures on the photoconductivity of GaSe single crystals under high-level optical pumping. FTP, no. 4, 1982, 612-615.

604. Agre, M.Ya. (137). Electron and atom collisions in an intense electromagnetic field. Voronezhskiy GU. Dissertation, 1981, 17 p. (KLDVAD, 3/82, 3510)

605. Akhmedzhanov, R.A., Ya.I. Khanin, I.N. Polushkin, and V.V. Yazenkov (0). Investigation of the gas discharge positive column in neon by the method of resonance laser fluorescence. Sb 4, 947-948. (RZhF, 4/82, 4G508)

606. Akulin, V.M., and N.V. Karlov (1). Motion of a self-induced waveguide channel during strong vibrational excitation of a polyatomic molecular gas by laser radiation. KE, no. 4, 1982, 842-844.

607. Alekseyev, A.I., and A.M. Basharov (16). Light echo in gases. IAN Fiz, no. 3, 1982, 557-573.

AD-A129 467 BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS NUMBER 58 MARCH-APRIL 1982(U) DEFENSE INTELLIGENCE AGENCY WASHINGTON DC DIRECTORATE FOR SCI.. MAY 83 2/2

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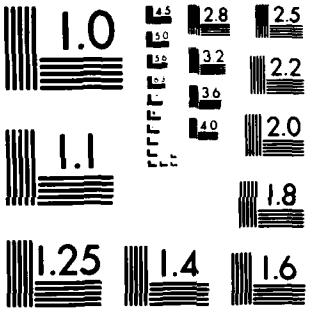

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

608. Amemiya, H. (0). Suppression and excitation of an ionization wave by an externally launched wave. Sb 5, 101-102. (RZhF, 4/82, 4G85)

609. Andrianov, A.V., and I.D. Yaroshetskiy (4). Discovery of a "linear" photogalvanic effect in indium antimonide. FTP, no. 4, 1982, 706-708.

610. Basiyev, T.T., Yu.K. Voron'ko, Ye.O. Kirpichenkova, S.B. Mirov, and V.V. Osiko (1). Conversion of color centers in LiF crystals under the effect of laser radiation. KSpF, no. 3, 1982, 3-9.

611. Belkin, S.N. (44). Nutation phenomena and bistability in a system of coherent excitons, photons and biexcitons in semiconductors. Institut prikladnoy fiziki AN MSSR. Dissertation 1980, 19 p. (KLDVAD, 4/82, 5209)

612. Belousov, A.V. (44). Optical properties of electron vibrational systems in a resonant low-frequency laser field. Institut prikladnoy fiziki AN MSSR. Dissertation, 1981, 16 p. (KLDVAD, 4/82, 5211)

613. Blokh, O.G., M.I. Golovey, and A.V. Tsarik (114). Dispersion characteristics of electro- and piezooptic coefficients for silver thiogallate crystals. UFZh, no. 4, 1982, 595-598.

614. Bokov, Yu.S., Yu.S. Kas'yanov, V.V. Korobkin, Yu.S. Leonov, and V.N. Mishachev (1). Conditions for using a laser-induced x-ray source in contact lithography. ZhTF, no. 3, 1982, 538-539.

615. Brodin, M.S., V.P. Kaperko, and M.G. Matsko (5). Region of exciton molecules and electron-hole plasma in GaSe. UFZh, no. 4, 1982, 612-613.

616. Budkevich, B.A., V.A. Pilipovich, I.A. Ges', and I.M. Romanov (299). Combined effect of electromagnetic and electric fields on amorphous tungsten anhydride films. DAN B, no. 4, 1982, 310-313.

617. Budnik, A.P., and A.V. Morozov (220). Effect of quantum effects and thermal motion of atoms on the distribution function of electrons by energy in a monochromatic e-m field. Tr 4, 87-91. (RZhF, 4/82, 4D1342)

618. Csillag, L., I. Janossy, V.F. Kitayeva, N. Kroo, N.N. Sobolev, and A.S. Zolotko (0). Laser-induced reorientation of nematic liquid crystals. Kozponti fizikai kutato intezet, no. 41, 1981, 10 p. (RZhF, 4/82, 4D1322)

619. Csillag, L., I. Janossy, V.F. Kitayeva, N. Kroo, and N.N. Sobolev (0). Effect of the finite size of the light spot on laser-induced reorientation of liquid crystals. Kozponti fizikai kutato intezet, no. 71, 1981, 14 p. (RZhF, 3/82, 3D1373)

620. Danishevskiy, A.M. (4). Polarization characteristics of stimulated emission from PbSe crystals during two-photon pumping due to selective filling of low energy levels. ZhETF, v. 82, no. 3, 1982, 685-690.

621. Davydova, N.A., and I.Yu. Shabliy (5). Formation of low ohmic layers near the surface of CdS crystals during laser irradiation. DAN Ukr, no. 4, 1982, 55-57.

622. Dmitriyev, N.V., V.N. Kudryavtsev, and P.A. Pyatakov (0). Electro-acoustic interaction using a photorefractive grating in lithium niobate. ZhTF P, no. 8, 1982, 502-505.

623. Dneprovskiy, V.S. (2). Resonant interaction of high-power ultrashort optical pulses with semiconductors. IAN Fiz, no. 3, 1982, 586-592.

624. Gaponenko, S.V., V.P. Gribkovskiy, L.G. Zimin, and N.K. Nikeyenko (3). Deformation of the absorbing edge in zinc selenide under the effect of laser radiation. KE, no. 3, 1982, 610-611.

625. Gladush, G.G., L.S. Krasitskaya, Ye.B. Levchenko, and A.L. Chernyakov (0). Thermocapillary convection in a liquid under the effect of high-power laser radiation. KE, no. 4, 1982, 660-667.

626. Gorbunova, T.M. (0). Excitation of short-lived self-ionized levels of the Cu atom in a discharge with a hollow cathode and a pulsed laser. Sb 37, 257-293. (RZhF, 4/82, 4G45)

627. Grigorov, V.A., and Ye.F. Martynovich (313). Einstein spectral coefficient for F_2^- color centers in lithium fluoride. ZhTF P, no. 6, 1982, 341-343.

628. Izosimov, I.N., S.P. Mikhalevich, Yu.V. Naumov, A.I. Sychev, and N.A. Shishunov (0). Device for measuring the degree of orientation of nuclei under optical pumping by a pulsed dye laser. Sb 34, 455.

629. Izosimov, I.N., S.P. Mikhalevich, Yu.V. Naumov, A.I. Sychev, and N.A. Shishunov (0). Orientation of ^{23}Na nuclei under optical pumping by a pulsed dye laser. Sb 34, 456.

630. Kalandarishvili, K.G., Yu.V. Koval'chuk, and Ye.L. Portnoy (4). Photoluminescence in epitaxial layers of GaAs exposed to laser action. ZhTF P, no. 7, 1982, 436-439.

631. Khalimanovich, D.M. (0). Two-quantum interaction of picosecond laser pulses with organic compound vapors. ZhPS, v. 36, no. 4, 1982, 587-591.

632. Klipko, A.T., and V.V. Shashkin (10). Optically-induced absorption of light by amorphous ZnS films. ZhTF, no. 4, 1982, 771-772.

633. Kvitsinskiy, V.A., V.I. Lukashenko, and G.V. Pitatelev (0). Influence of the discharge current on the dimer concentration in potassium vapor. Sb 5, 431-432. (RZhF, 4/82, 4G578)

634. Loktyushin, A.A., A.N. Soldatov, V.B. Sukhanov, and V.O. Troitskiy (0). Lasing from color centers in lithium fluoride crystals irradiated by protons. ZhTF, no. 4, 1982, 825-826.

635. Manykin, E.A., S.O. Yelyutin, S.M. Zakharov, V.N. Likhachev, and A.I. Maymistov (16). Coherent phenomena during the interaction of light pulses with resonant media. IAN Fiz, no. 3, 1982, 538-556.

636. Margolin, L.Ya., N.Ya. Polyanovskaya, L.N. Pyatnitskiy, and S.A. Edel'man (0). Procedure for resonance fluorescence cross-section measurement in plasma. Sb 4, 997-998. (RZhF, 4/82, 4G509)

637. Matviychuk, A.S., and G.A. Kholodar' (0). Transient energy transfer of coherent light beams in GaAs and InP semiconductors. Sb 25, 139-142. (RZhF, 4/82, 4D1321)

638. Melik-Barkhudarov, T.K. (0). Dynamics of an atom in a field of a strong monochromatic wave and thermal radiation. IAN Arm, no. 5, 1981, 329-335. (RZhF, 4/82, 4D1358)

639. Mikla, V.I., and D.G. Semak (0). Transfer and relaxation phenomena of nonequilibrium charge carriers in glassy chalcogenide semiconductor layers during optical recording. Sb 38, 119-125. (RZhF, 3/82, 3Ye1464)

640. Minogin, V.G. (72). Theory on radiative atomic capture. KE, no. 3, 1982, 505-513.

641. Ovsyankin, V.V., and A.A. Fedorov (7). Nonlinear delocalization of excitation in disordered crystals. ZhETF P, v. 35, no. 5, 1982, 199-201.

642. Paramonov, G.K., and V.A. Savva (0). Forming hot and cold systems during radiation pumping of particles with degenerate energy levels. ZhPS, v. 36, no. 4, 1982, 624-631.

643. Parkhomenko, A.I., and V.Ye. Prokop'yev (75). Photoinduced emf in gases. Institut avtomatiki i elektrometrii SOAN. Preprint, no. 150, 1981, 11 p. (RZhF, 4/82, 4G64)

644. Rosinski, K. (NS). Optical detection of Rydberg states. APP, v. A60, no. 4, 1981, 599-601. (RZhF, 4/82, 4D443)

645. Rudov, S.G., A.A. Minakov, and V.G. Veselago (1). Direct observation of photoinduced change in magnetocrystal anisotropy in $CdCr_2Se_4$. Fizicheskiy institut AN SSSR. Preprint, no. 237, 1981, 27 p. (RZhF, 4/82, 4Ye1736)

646. Schubert, M., K.E. Suesse, W. Vogel, D.G. Welsch, and B. Wilhelmi (East Germans). Photon debunching during resonant fluorescence from an atomic beam with a fluctuating number of atoms. KE, no. 3, 1982, 495-500.

647. Shtyrkov, Ye.I. (38). Optically induced matrices of coherent superposed atomic states. IAN Fiz, no. 3, 1982, 579-585.

648. Solomko, A.A. (51). Interaction of laser and microwave radiation in electrooptic and magnetic crystals. Kiyevskiy GU. Dissertation, 1981, 30 p. (KLDVAD, 4/82, 5194)

649. Stel'makh, G.F., and M.P. Tsvirko (0). Determining the formation probabilities of excited singlet states during triplet-triplet annihilation. ZhPS, v. 36, no. 4, 1982, 609-616.

650. Zaretskiy, D.F., A.V. Kozlinskiy, and V.V. Lomonosov (0). Stimulated recombination of atoms in beams. KE, no. 3, 1982, 478-482.

651. Zuykov, V.A., V.V. Samartsev, and R.G. Usmanov (38). Reverse light echo in ruby. IAN Fiz, no. 3, 1982, 600-603.

3. Laser Spectroscopy

652. Akopyan, I.Kh., and B.V. Novikov (12). Exciton spectra of Ag_2HgI_4 and Cu_2HgI_4 crystals. Leningradskiy GU. Vestnik, no. 2, 1982, 18-24.

653. Al'tshuler, S.A., B.I. Kochelayev, Yu.G. Nazarov, and A.Kh. Khasanov (11). Study on electron paramagnetic resonance, spin and phonon kinetics in paramagnetic ionic crystals using Brillouin and Raman scattering. IAN Fiz, no. 3, 1982, 418-422.

654. Antonov, V.S., and A.N. Shibanov (0). Optical mass-spectrum of anthracene molecules. OiS, v. 52, no. 3, 1982, 390-392.

655. Artamonov, V.V. (6). Spectrum of impurity vibrations in ZnP_2 and CdP_2 crystals. UFZh, no. 4, 1982, 553-556.

656. Balashov, Ye.I., A.D. Britov, S.M. Karavayev, A.L. Kurbatov, and M.V. Shubin (7). Use of tunable injection lasers in IR spectroscopy. OMP, no. 4, 1982, 12-16.

657. Baltrameyunas, R., D. Veletskas, E. Gaubas, and I. Kapturauskas (49). Characteristics of optical self-diffraction by inhomogeneous dynamic gratings in semiconductors. ZhTF P, no. 5, 1982, 291-295.

658. Baranov, A.V., Ya.S. Bobovich, and V.L. Yermolayev (0). Simple method for producing resonant molecular Raman spectra in triplet states, and its application. OiS, v. 52, no. 3, 1982, 466-473.

659. Bokhan, P.A., and L.V. Fadin (0). Study on the processes of excitation transfer in a europium ion. OiS, v. 52, no. 4, 1982, 626-629.

660. Bolot'ko, L.M., V.V. Gruzinskiy, V.I. Danilova, and T.N. Kopylova (0). Triplet-triplet absorption in organic compounds that lase efficiently in the UV. OiS, v. 52, no. 4, 1982, 635-638.

661. Boriskin, A.I., A.S. Bryukhanov, Yu.A. Bykovskiy, V.K. Vasil'yev, and V.M. Yeremenko (0). Mass spectrometer with double focusing and a laser ion source. Sb 39, 28-36. (RZhF, 4/82, 4V349)

662. Borisov, Ye.N., and P.Ye. Pak (0). Device for studying fluorescence during pulsed laser excitation. PTE, no. 2, 1982, 214.

663. Borisova, I.V., and A.A. Lychev (630). Tetraphenylphosphone perbromate. ZhNKh, no. 4, 1982, 1061-1063.

664. Boyko, S.A. (6). Optical properties of various gallium, germanium and cadmium chalcogenides in the exciton absorption band region. Institut poluprovodnikov AN UkrSSR. Dissertation, 1981, 13 p. (KLDVAD, 4/82, 5217)

665. Boyko, V.A., S.A. Mayorov, S.A. Pikuz, I.Yu. Skobelev, A.Ya. Fayenov, and K.A. Shilov (0). Intensity of resonant two-electron satellite lines in He-like ions in an optically thick plasma. OiS, v. 52, no. 3, 1982, 433-436.

666. Braun, V.R., L.N. Krasnoperov, and V.N. Panfilov (0). Observing reversal of Lamb dip saturation in the laser magnetic resonance spectrum of atomic chlorine and precise measurement of isotopic shift in the $^2P_{1/2} \leftarrow {}^2P_{3/2}$ transition. OiS, v. 52, no. 4, 1982, 719-723.

667. Bugayev, V.A., E.P. Shliteris, Yu.F. Klement'yev, and V.A. Kudryashova (15). Laser spectroscopy, submillimeter lasing and passive Q-switching in dimethyl ether pumped by CO_2 laser radiation. KE, no. 3, 1982, 514-520.

668. Burakov, V.S., V.A. Kononov, L.S. Korochkin, S.A. Mikhnov, V.M. Khulugurov, V.P. Khyuppenen, V.A. Chepurnoy, and A.P. Shkadarevich (0). Properties of a passive switch using color centers of LiF crystal. ZhPS, v. 36, no. 3, 1982, 494-496.

669. Chepur, D.V., P.P. Puga, I.I. Rosola, and G.D. Puga (0). Raman spectra of Hg(Ce)-As(Sb)-S-I type noncrystal semiconductor compounds. Sb 38, 54-59. (RZhF, 3/82, 3D551)

670. Denchev, O.Ye., A.G. Zhiglinskiy, N.S. Ryazanov, and A.N. Samokhin (0). Feasibility of split-beam intracavity spectrointerferometry of phase objects using a dye laser. ZhPS, v. 36, no. 3, 1982, 377-383.

671. Dobryshin, V.Ye., V.I. Rakhovskiy, and V.M. Shustryakov (0). Measuring the absolute cross-sections for exciting the $4^3P_{0,1,2}$ state in calcium by electron impact. OiS, v. 52, no. 4, 1982, 609-613.

672. Dzhioyev, R.I., B.P. Zakharchenya, Yu.G. Kusrayev, and V.G. Fleysher (4). Optical orientation and alignment of excitons in HgI_2 crystals. IAN Fiz, no. 3, 1982, 514-516.

673. Ganichev, S.D., S.A. Yemel'yanov, and I.D. Yaroshetskiy (4). Spectral sign reversal of photon charge carrier drag in the submilllimeter range. ZhETF P, v. 35, no. 7, 1982, 297-299.

674. Gladkov, S.M., and N.I. Koroteyev (2). Controlling line shape and signal-to-noise ratio in polarization active Raman spectroscopy. KE, no. 4, 1982, 759-763.

675. Gomonnay, A.V., Yu.M. Vysochanskiy, and V.Yu. Slivka (0). Angular dispersion of soft phonons in a uniaxial $Sn_2Pb_2S_2$ ferroelectric. FTT, no. 4, 1982, 1068-1073.

676. Gorelik, V.S. (1). Raman study on coupled and continuous vibrational states in dielectric crystals. Tr 2, 15-140.

677. Gorelik, V.S., V.B. Divak, and M.M. Sushchinskiy (1). Resonant Raman scattering by surface phonons in gallium phosphide crystals. KSpF, no. 4, 1982, 17-22.

678. Gorelik, V.S., L.G. Reznik, and B.S. Umarov (0). Controlling the selection of frequency-angular Raman scattering spectra for lithium niobate. OiS, v. 52, no. 3, 1982, 392-395.

679. Grishko, V.I., and I.G. Yudelevich (0). Applications of lasers in analytical chemistry. Zavodskaya laboratoriya, no. 4, 1982, 1-12.

680. Guliyev, F.A. (40). Study on the spectral characteristics of the pigment system of higher plants by derivative and laser spectroscopy. Tbilisskiy GU. Dissertation, 1980, 26 p. (KLDVAD, 3/82, 3760)

681. Kleinert, P., and E. Jahne (NS). Theoretical study of Raman scattering and infrared absorption spectra of $Ga_{1-x}In_xP$ mixed crystals. PSS, v. B107, no. 1, 1981, 177-183. (RZhF, 3/82, 3D635)

682. Klyavin'sh, Ya.P., and M.L. Yanson (0). Processes of populating some atomic and molecular states in laser-excited potassium vapor. OiS, v. 52, no. 4, 1982, 630-634.

683. Klyuyev, Yu.A., A.M. Naletov, V.I. Nepsha, L.D. Belimenko, V.A. Laptev, and M.I. Samoylovich (0). Transformation of optically active centers in synthetic diamonds due to temperature. ZhFKh, no. 3, 1982, 524-531.

684. Konovalov, I.P., Ye.D. Protsenko, and Ye.S. Shabayev (0). Nonlinear laser Zeeman multiplet spectroscopy. OiS, v. 52, no. 4, 1982, 743-744.

685. Kosichkin, Yu.V., A.I. Kuznetsov, A.I. Nadezhdinskiy, A.N. Perov, and Ye.V. Stepanov (1). Increasing the accuracy of a high-resolution laser diode spectrometer by stabilizing the scanning cycle against a reference line. KE, no. 4, 1982, 822-825.

686. Kouzov, A.P., N.D. Orlova, and L.A. Pozdnyakova (0). Some characteristics of vibrational-rotational spectral line shapes for hydrogen and deuterium in solutions. OiS, v. 52, no. 4, 1982, 651-656.

687. Kukk, P., and A. Freiberg (0). Steady-state third-order nonlinear spectroscopy in inhomogeneous media. IAN Est, no. 4, 1981, 357-363. (RZhF, 4/82, 4D1372)

688. Malisek, V. (NS). Rotational structure of Raman spectral lines. Sb 40, 147-161. (RZhF, 3/82, 3D513)

689. Mirlin, D.N., and V.F. Sapega (4). Magnetic depolarization of hot photoluminescence in GaAs crystals. IAN Fiz, no. 3, 1982, 517-521.

690. Novikov, V.P., and M.A. Novikov (426). Optoacoustic spectroscopy of fiber optics and integrated optical elements. ZhTF P, no. 6, 1982, 372-377.

691. Orlov, R.Yu., and M.Ye. Uspenskaya (2). Using Raman spectroscopy to study the ordering of mineral structures. Sb 41, 134-138. (DR, 4/82, 90)

692. Popovic, Z.V., and H.J. Stolz (NS). IR reflection and Raman spectra of germanium dichalcogenides. Part 2. $GeSe_2$. PSS, v. B108, no. 1, 1981, 153-163. (RZhF, 4/82, 4D731)

693. Porotnikov, N.V., N.G. Chaban, K.I. Petrov, and V.G. Savenko (0). Study on the vibrational spectra of complex $Li_2ZnTi_3O_8$ and $Li_2Zn_3Ti_4O_{12}$ oxides. ZhNKh, no. 3, 1982, 599-603.

694. Seleznev, B.I., G.M. Yemel'yanova, V.A. Tkal', and B.V. Makushkin (0). Effect of laser irradiation on the structure of silicon dioxide films doped with phosphorus ions. ZhPS, v. 36, no. 3, 1982, 413-416.

695. Stoyanov, Ye.S. (77). Study on outer shell hydration of $SbCl_3$ $(tributylphosphate)_2$ in a system of $SbCl_3$-tributylphosphate-H_2O, using differential IR spectroscopy. ZhNKh, no. 3, 1982, 726-731.

696. Suchkov, A.F. (1). Theory on the space-time characteristics of multimode laser radiation and development of a method for intracavity laser spectroscopy. Fizicheskiy institut AN SSSR. Dissertation, 1980, 16 p. (TVKE, 29/82, 731)

697. Sushchinskiy, M.M. (1). Raman scattering during phase transitions in crystals. Tr 2, 3-14.

698. Travnikov, V.V., and V.V. Krivolapchuk (0). Exciton diffusion and self-absorption of resonant radiation. FTT, no. 4, 1982, 961-970.

699. Udartsev, A.M., G.N. Musiyenko, and S.M. Mashakova (242). Using intracavity laser spectroscopy to determine various metals in a flame. Sb 12, 144-148. (DR, 4/82, 422)

700. Valakh, M.Ya., Ye.V. Pidlisnyy, and G.Yu. Rud'ko (0). Kinetics of optical bleaching of KCl crystals with F_A(Li) centers. ZhPS, v. 36, no. 3, 1982, 502-504.

701. Vasil'yev, V.V., D.G. Yesayev, and T.I. Zakhar'yash (0). Method of waveguide spectroscopy for studying thin films. OiS, v. 52, no. 3, 1982, 545-547.

702. Vetchinkin, S.I. (0). Light scattering and multiphoton transitions in atoms and molecules. Sb 42, 121-141.

703. Voytovich, A.P., and V.V. Mashko (3). Method for intracavity absorption spectroscopy. Otkr izobr, no. 12, 1982, 788923.

704. Yermakov, O.N., and V.P. Sushkov (0). Radiative recombination of deep centers in $In_{1-x}Ga_xP$ solid solutions. FTP, no. 3, 1982, 461-465.

705. Yevseyev, I.V. (16). Polarization spectroscopy of gas media using photon echo. IAN Fiz, no. 3, 1982, 614-619.

706. Zakharchenya, B.P., D.N. Mirlin, V.I. Perel', and I.I. Reshina (4). Spectrum and polarization of photoluminescence from hot electrons in semiconductors. UFN, v. 136, no. 3, 1982, 459-499.

707. Zubov, V.A., and A.V. Kravskiy (1). High-resolution holographic spectroscopy. Fizicheskiy institut AN SSSR. Preprint, no. 200, 1981, 16 p. (RZhF, 3/82, 3D1017)

J. BEAM-TARGET INTERACTION

1. Metal Targets

708. Apostol, I., E. Cojocaru, V. Draganescu, I.N. Mihailescu, L. Nistor, and V.S. Teodorescu (NS). Existence of a liquid phase in the interaction of high-power pulsed CO_2 laser radiation with metal targets. RRP, no. 4, 1981, 357-370. (RZhF, 3/82, 3D1372)

709. Arsenin, V.Ya., V.V. Gavrilov, I.I. Kochetov, V.B. Mitrofanov, A.Kh. Pergament, M.I. Pergament, A.N. Tikhonov, and A.I. Yaroslavskiy (0). Methods for mathematical processing of x-ray images. Sb 43, 147-154. (RZhF, 3/82, 3G692)

710. Azizov, S.T., A.V. Ben'kov, and V.B. Lugovskoy (0). Observation of nonequilibrium UV radiation during laser irradiation of tungsten. IAN Uz, no. 5, 1981, 55-57. (RZhF, 3/82, 3D1378)

711. Bobyrev, V.A., F.V. Bunkin, N.A. Kirichenko, B.S. Luk'yanchuk, and A.V. Simakin (1). Characteristics of ignition and combustion of titanium in an oxidizing medium under the effect of CO_2 laser radiation. KE, no. 4, 1982, 695-703.

712. Bondarenko, A.V., Ye.V. Dan'shchikov, V.A. Dymshakov, F.V. Lebedev, and A.V. Ryazanov (0). Experimental study of laser gas breakdown near a metal surface. Sb 5, 209-210. (RZhF, 4/82, 4G409)

713. Borovskiy, I.B., D.D. Gorodskiy, I.M. Sharafeyev, and S.F. Moryashchev (66). Mass transfer during the processing of metal surfaces by c-w laser welding. DAN SSSR, v. 263, no. 3, 1982, 616-618.

714. Buzykin, O.G., A.V. Burmistrov, S.S. Klyukin, and M.N. Kogan (133). Localization of the reaction and formation of spatial structures during laser heating of oxidizing metals. Sb 44, 124-126.

715. Buzykin, O.G., A.V. Burmistrov, S.S. Klyukin, M.N. Kogan, and V.M. Us'kov (0). Effect of thermal conductivity effects on the kinetics of oxidation and the dynamics of heating metals in air under the effect of radiation. DAN SSSR, v. 236, no. 5, 1982, 1115-1118.

716. Komolov, V.L. (0). Kinetics of heating and optical breakdown of thin films with spatially-homogeneous absorption under intense optical interaction. ZhTF, no. 3, 1982, 478-485.

717. Komolov, V.L. (0). Optical breakdown of thin films with spatially inhomogeneous absorption under intense optical interaction. ZhTF, no. 3, 1983, 486-491.

718. Lebedev, V.V., V.M. Plyasulya, B.I. Troshin, and V.P. Chebotayev (0). Optical properties of a low-temperature laser plasma at resonance radiation pumping of magnesium vapor. Sb 5, 217-218. (RZhF, 4/82, 4G410)

719. Mikhalenko, F.P. (0). Methods for increasing the strength of cutting dies. Vestnik mashinostroyeniya, no. 1, 1982, 60-65.

720. Mirkin, L.I., and Ye.P. Smyslova (438,248). Small-angle scattering of x-rays in aluminum irradiated by millisecond laser pulses. IVUZ Fiz, no. 3, 1982, 104-105.

721. Trubatsin, V.I., Ye.O. Pskovitinov, A.F. Khudyshev, V.S. Aleynikov, and V.V. Karpetskiy (0). Using a sealed-off CO_2 laser for metal welding. Sb 45, 49-50. (TVKE, 30/82, 486)

722. Uglov, A.A. (0). Thermal processes during welding and processing with e-beams and laser beams. Cited in FiKhOM, no. 2, 1982, 125.

723. Uglov, A.A., and M.B. Ignat'yev (0). Self-oscillation during the interaction of a laser beam with the surface of a solid target in high-pressure gases. ZhTF P, no. 8, 1982, 481-485.

724. Ursu, I., I. Apostol, D. Barbulescu, V. Draganescu, I.N. Mihailescu, M. Moldovan, I. Morjan, A.M. Prokhorov, V.P. Ageyev, and V.I. Konov (0). Evaporation of metal targets under the action of pulsed high-power microsecond CO_2 laser radiation. Sb 4, 817-818. (RZhF, 4/82, 4G412)

2. Dielectric Targets

725. Azarov, V.V., T.I. Bogdanova, A.R. Ryabukhin, and V.M. Shul'ga (188). Character of the damage to lithium niobate and ADP single crystals by nitrogen laser radiation. Tr 3, 216-218. (RZhF, 4/82, 4Ye758)

726. Klochan, Ye.L., S.P. Popov, and G.M. Fedorov (98). Transient absorption wave in a solid transparent dielectric. I-FZh, v. 42, no. 4, 1982, 633-639.

727. Novikov, N.P., and N.N. Novikova (176). Micromechanical model for the destruction of silicate glass. UFZh, no. 4, 1982, 516-520.

3. Semiconductor Targets

728. Bonch-Bruyevich, A.M., A.Y. Bumyalis, V.L. Komolov, M.N. Libenson, E.K. Maldutis, B.A. Raykhman, and V.N. Smirnov (0). Optical breakdown of gallium arsenide under the effect of two-frequency pulses. ZhTF P, no. 8, 1982, 507-510.

729. Gershinskiy, A.Ye., A.V. Rzhanov, and Ye.I. Cherepov (10). Thin-film silicides in microelectronics. Mikroelektronika, no. 2, 1982, 83-94.

730. Ivlev, G.D. (299). Dynamics of annealing ion-doped silicon by giant pulsed ruby laser radiation. ZhTF P, no. 8, 1982, 468-472.

731. Portnoy, Ye.L., Yu.V. Koval'chuk, G.V. Ostrovskaya, A.S. Piskarskas, V.I. Skopina, V.I. Smil'gyavichyus, and V.B. Smirnitskiy (0). Laser annealing of gallium phosphide layers produced by ion-plasma sputtering. ZhTF P, no. 8, 1982, 462-465.

4. Miscellaneous Targets

732. Aleksandrov, L.N. (10). Kinetics of the detonation (shock) process in crystalline films. ZhTF P, no. 6, 1982, 368-371.

733. Andreyev, A.P., S.F. Akhmetov, A.G. Davydchenko, S.N. Ivanov, S.V. Kolodiyeva, I.M. Kotelyanskiy, and V.V. Medved' (0). Study on the effect of high temperature annealing on the absorption of acoustic waves in $(Y_{1-x}Lu_x)_3Al_5O_{12}$ solid solutions. FTT, no. 4, 1982, 1228-1230.

734. Askar'yan, G.A., and I.M. Rayevskiy (1). Possibilities for increasing the efficiency of laser-generated current. ZhTF P, no. 8, 1982, 472-478.

735. Dubkov, V.M. (7). Analysis of conditions for producing homogeneous optical coatings using pulsed laser radiation. OMP, no. 3, 1982, 32-36.

736. Kuznetsov, A.N. (0). Removal of material from the fracture zone during laser cutting of rock. Deposit at VINITI, no. 5776-81, 21 Dec 1981, 13 p. (DR, 3/82, 123a)

737. Lysenko, V.S., A.N. Nazarov, and M.M. Lokshin (0). Activation of doping impurities by means of laser irradiation in thin surface layers of oxidized silicon implanted by boron ions. Mikroelektronika, no. 1, 1982, 74-77. (RZhF, 4/82, 4Ye759)

738. Pamfilov, Ye.A., and V.D. Severin (0). Determining surface quality during laser processing. Vestnik mashinostroyeniya, no. 4, 1982, 46-48.

739. Zinov'yev, A.V., and V.B. Lugovskoy (202). Determining the temperature of electrons in short convective and induced current pulses. ZhTF, no. 4, 1982, 650-653.

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740. Ageyev, V.A., V.D. Yegorov, and M.I. Nedel'ko (507). Resonant interaction of laser radiation with a glow discharge in He-Ne. ZhTF, no. 3, 1982, 517-518.

741. Aleksandrov, V.V., V.D. Vikharev, V.V. Gavrilov, S.B. Kormer, V.M. Murugov, A.V. Senik, V.I. Pankratov, M.I. Pergament, and A.I. Yaroslavskiy (0). Study on soft x-radiation in a laser plasma by means of a system with a high dynamic range. Sb 32, 61-65. (RZhF, 3/82, 3G672)

742. Aleksandrov, V.V., V.D. Vikharev, V.P. Zotov, and N.V. Yufa (0). Spectroscopy of a plasma corona with high time resolution. Sb 43, 90-97. (RZhF, 3/82, 3G674)

743. Amus'ya, M.Ya., A.S. Baltenkov, and V.K. Dolmatov (0). "Drag" of electrons in interaction of radiation with weakly ionized gas. Sb 5, 201-202. (RZhF, 3/82, 3G594)

744. Anan'in, O.B., Yu.A. Bykovskiy, V.P. Gusev, Yu.P. Kozyrev, I.V. Kolesov, A.S. Pasyuk, and V.D. Peklenkov (52). Obtaining multicharged ions from a laser plasma in a magnetic field. Ob"yedinennyy institut yadernykh issledovaniy. Preprint, no. R9-81-632, 1981, 4 p. (RZhF, 4/82, 4G414)

745. Anan'in, O.B., Yu.A. Bykovskiy, V.P. Gusev, Yu.P. Kozyrev, V.D. Peklenkov, A.S. Pasyuk, and I.V. Kolesov (0). Study on the characteristics of a laser ion source for a cyclotron. Sb 16, 98-102. (RZhF, 4/82, 4V406)

746. Andreyev, N.Ye., O.M. Gradov, P. Karl, V.P. Silin, and G.L. Stenchikov (1). Nonlinear absorption of laser radiation by a dispersing plasma coronal target. KSpF, no. 3, 1982, 26-32.

747. Anisimov, S.I., M.F. Ivanov, P.P. Pashinin, and A.M. Prokhorov (0). Numerical modeling of optical breakdown waves in gases. Sb 14, 11-20.

748. Bakhrakh, S.M., V.Yu. Kaynov, S.B. Kormer, V.D. Urlin, A.A. Shanin, and Yu.V. Yanilkin (0). Numerical study on the motion of a light-absorbing plasma in a shock wavefront. Fizika plazmy, no. 2, 1982, 262-268.

749. Bakos, J.S., I.B. Foldes, P.N. Ignacz, and Zs. Sorlei (NS). Self-trapping and scattering of light in a laser-produced spark. Sb 14, 791-792. (RZhF, 3/82, 3G585)

750. Barabash, L.Z., Yu.A. Bykovskiy, A.A. Golubev, et al. (565). Study on a laser plasma as a source of ions in the problem of controlled fusion by heavy ions. Institut teoreticheskoy i eksperimental'noy fiziki. Preprint, no. ITEF-126, Moskva, 1981, 35 p. (KL, 15/82, 12481)

751. Barkhudarov, E.M., G.V. Gelashvili, G.G. Gumberidze, and D.I. Razmadze (0). Current-voltage characteristics of a laser-emissive discharge and a fast electron temperature determination. Sb 5, 207-208. (RZhF, 4/82, 4G411)

752. Belotserkovskiy, O.M. (0). Various numerical models in plasma physics. Sb 14, 48-63.

753. Bespalov, D.F., I.I. Vergun, A.Z. Mints, R.P. Pleshakova, and A.Ye. Shikanov (0). Producing (d,t) neutrons in an acceleration tube with a laser deuteron source. Atomnaya energiya, v. 52, no. 4, 1982, 272-273.

754. Bol'shov, L.A., Ye.P. Velikhov, A.M. Dykhne, and V.A. Roslyakov (0). Possibility of laser acceleration of charged particles. Sb 14, 64-71.

755. Breyev, V.V., L.A. Knizhnikova, and A.F. Nastoyashchiy (0). Mechanism of instability of a long laser spark plasma column. Sb 4, 793-794. (RZhF, 3/82, 3G597)

756. Brodnikovskiy, A.M., S.M. Gladkov, V.N. Zadkov, M.G. Karimov, and N.I. Koroteyev (2). Nonlinear optical effects in a laser spark plasma in a nanosecond Nd:YAG laser pulse field. ZhTF P, no. 8, 1982, 497-502.

757. Burtsev, V.A., A.A. Bardinov, A.B. Berezin, A.P. Zhukov, V.A. Kubasov, B.V. Lyublin, V.N. Litunovskiy, V.M. Kozhevin, V.A. Ovsyannikov, A.N. Popitayev, V.G. Smirnov, V.A. Titov, and Yu.I. Sholokhov (0). Study on the heating of a dense plasma in linear theta-pinch systems. Sb 46, D12. (RZhF, 3/82, 3G330)

758. Bychenkov, V.Yu., Yu.A. Zakharenkov, O.N. Krokhin, A.A. Rupasov, V.P. Silin, G.V. Sklizkov, A.N. Starodub, V.T. Tikhonchuk, and A.S. Shikanov (0). Ultrafast diagnostics of the parameters of a plasma corona. Sb 43, 114-118. (RZhF, 3/82, 3G663)

759. Bykovskiy, Yu.A., Yu.P. Kozyrev, A.S. Tsybin, K.I. Kozlovskiy, and B.Yu. Sharkov (0). Laser multicharged ion source. Sb 16, 95-97. (RZhF, 4/82, 4V430)

760. Carlhoff, C., E. Krametz, Z. Mucha, J.H. Schaefer, and J. Uhlenbusch (NS). Measurement of temperature and flow field in continuous optical discharges. Sb 4, 795-796. (RZhF, 3/82, 3G586)

761. Chirkov, V.A., A.A. Iyukhin, G.V. Koloshnikov, A.Ye. Kramida, G.V. Peregudov, M.Ye. Plotkin, and Ye.N. Ragozin (0). Using population density measurements of H-like ion energy levels to determine the electron temperature in laser-produced plasma. Sb 4, 975-976. (RZhF, 4/82, 4G493)

762. Chugunov, A.Yu., F.A. Nikolayev, and A.V. Shelobolin (0). Space-time distribution in long laser spark-initiated electrical air breakdown. Sb 4, 797-798. (RZhF, 3/82, 3G587).

763. Danilychev, V.A., V.D. Zvorykin, I.B. Kholin, and A.Yu. Chugunov (0). Detonation and radiation waves in gases supported by 10.6 μm laser pulses. Sb 4, 799-800. (RZhF, 3/82, 3G588)

764. Dembinski, M., J. Kurzyna, and Z. Szymanski (0). Decay and reignition of optical discharge plasma. Sb 4, 801-802. (RZhF, 3/82, 3G589)

765. Denus, S., J. Farny, S. Kaliski, M. Kielesinski, J. Kostecki, A. Kalbarczyk, S. Nagraba, J. Wolowski, and E. Woryna (Russ transliteration: I. Farny, I. Kostetski, A. Kal'barchyk, I. Volovski, E. Voryna). Diagnostics of a plasma formed by a pulsed CO_2 laser focused on high-Z targets. Sb 43, 124-130. (RZhF, 3/82, 3G669)

766. Fisher, V.I., V.M. Kharash (580). Superdetonation motion of a plasma front in the direction of high-power laser radiation. ZhETF, v. 82, no. 3, 1982, 740-746.

767. Gamaliy, Ye.G., V.A. Gasilov, I.G. Lebo, V.B. Rozanov, V.F. Tishkin, and A.P. Favorskiy (0). Magnetic field generation in laser targets. Sb 5, 213-214. (RZhF, 3/82, 3G382)

768. Ganeyev, A.S., A.L. Zapysov, A.I. Zuyev, I.M. Izrailev, V.B. Kryuchenkov, V.A. Lykov, V.A. Podgornov, V.G. Pokrovskiy, and N.I. Simanova (0). X-ray spectrum from glass-shelled laser targets. KE, no. 4, 1982, 711-717.

769. Gavrilov, P., M. Pospisilova, and M. Vrbova (NS). Spatial distribution of the brightness of a laser spark. CCF, v. A31, no. 5, 1981, 479-481. (RZhF, 4/82, 4D1339)

770. Gerasimenko, M.V., G.I. Kozlov, and V.A. Kuznetsov (17). Diagnostics of a laser plasmatron plasma. Institut problem mekhaniki AN SSSR. Preprint, no. 184, 1981, 32 p. (KL, 18/82, 15161)

771. Gorbunov, L.M., O.M. Gradov, D. Suender (East German, Russ transliteration: D. Zyunder), and R.R. Ramazashvili (1). Theory on the kinetics of motion for plasma boundaries propelled by high-power e-m waves. KSpF, no. 3, 1982, 51-55.

772. Gul'ko, V.M., I.I. Kozlovskiy, N.F. Kolomiyets, A.F. Linev, A.Z. Mints, R.P. Pleshakova, Yu.I. Totskiy, and A.Ye. Shikanov (0). Construction of neutron tubes with laser ion sources. Atomnaya energiya, v. 52, no. 4, 1982, 271-272.

773. Imshennik, V.S. (0). Radiative energy losses during ultrahigh compression of laser thermonuclear targets. Sb 14, 162-169.

774. Knyazev, B.A., and S.V. Lebedev (0). Plasma production by photoionization of laser-produced vapor clouds in a vacuum. Sb 4, 807-808. (RZhF, 4/82, 4G441)

775. Konov, V.I., P.I. Nikitin, and A.M. Prokhorov (0). Turbulence in a laser spark created near a target. Sb 4, 809-810. (RZhF, 3/82, 3G595)

776. Korukhov, V.V., N.G. Nikulin, and B.I. Troshin (0). Experimental study of the population inversion level of K-ions of oxygen in a laser plasma. Sb 4, 851-852. (RZhF, 3/82, 3G593)

777. Krokhin, O.N., A.A. Rupasov, G.V. Sklizkov, and A.S. Shikanov (0). Harmonic generation in a laser plasma during spherical irradiation of a target. Sb 43, 118-124. (RZhF, 3/82, 3G656)

778. Kulik, P.P., A.G. Lioznov, E.K. Rozanov, A.F. Stebunov, and V.D. Shirinkin (0). Experimental method for studying the radiation spectra of a non-ideal metal plasma. Sb 5, 349-350. (RZhF, 4/82, 4G19)

779. Mazhukin, V.I., A.A. Uglov, and B.N. Chetverushkin (0). Numerical simulation of the laser plasma development near a metallic surface. Sb 4, 813-814. (RZhF, 3/82, 3G592)

780. Nastase, L., M.L. Pascu, and G. Musa (0). Nanosecond transients in a Townsend discharge. Sb 4, 635-636. (RZhF, 3/82, 3G600)

781. Petrov, V.G. (74). Short-circuiting geometry of a single pole arc during the evaluation of thermal balance in plasma. TVT, no. 2, 1982, 220-224.

782. Shevel'ko, A.P. (1). Study on the processes of dielectron recombination in a laser plasma. Fizicheskiy institut AN SSSR. Dissertation, 1981, 16 p. (KLDVAD, 3/82, 3628)

783. Ursu, I., I. Apostol, D. Apostol, D. Barbulescu, R. Dabu, M. Dinescu, Al. Harsany, I.N. Mihailescu, and M. Moldovan (NS). Shock waves induced in the ambient atmosphere by a laser spark generated in front of metallic targets by microsecond pulsed CO_2 laser radiation. Sb 4, 815-816. (RZhF, 3/82, 3G583)

784. Volkov, A.I., M.I. Gurevich, A.N. Kolomiyskiy, A.G. Lar'kin, R.I. Mustafin, M.I. Pergament, V.A. Petrov, Yu.S. Petrykin, O.V. Sadkova, and Ye.A. Senicheva (0). Basic principles of complex automation in laser fusion devices. Sb 43, 172-176. (RZhF, 3/82, 3G695)

785. Volosevich, P.P., A.A. Samarskiy, and L.P. Feoktistov (71). Optimization of laser shell targets. Institut prikladnoy matematiki AN SSSR. Preprint, no. 108, 1981, 37 p. (KL, 12/82, 10044)

786. Yerokhin, A.A., Yu.A. Zakharenkov, N.N. Zorev, O.N. Krokhin, G.V. Sklizkov, and A.S. Shikanov (0). Optical methods for diagnostics in experiments on laser heating of a plasma. Sb 43, 84-89. (RZhF, 3/82, 3G644)

787. Zakharenkov, Yu.A., N.N. Zorev, A.A. Kologrivov, O.N. Krokhin, A.A. Rupasov, G.V. Sklizkov, and A.S. Shikanov (0). Plasma diagnostics in the Kal'mar. Sb 43, 63-67. (RZhF, 3/82, 3G675)

788. Zakharov, S.M., G.V. Ivanenkov, A.A. Kolomenskiy, S.A. Pikuz, and A.I. Samokhin (1). Generation of a dense high-temperature plasma during the compression of a laser flare in a high-current accelerator diode. ZhTF P, no. 6, 1982, 359-363.

789. Zorev, N.N., G.V. Sklizkov, and A.S. Shikanov (1). Dynamics of ionizing shock waves during adiabatic gas motion. ZhETF, v. 82, no. 4, 1982, 1104-1113.

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

790. Ablekov, V.K., Yu.N. Denisov, and F.N. Lyubchenko (0). Spravochnik po gazodinamicheskim lazeram (Handbook on gasdynamic lasers). Moskva, Mashinostroyeniye, 1982, 162 p.

791. Alekseyev, . .V., M.V. Kabanov, and I.F. Kushtin (78). Opticheskaya refraktsiya v zemnoy atmosfere. Gorizontal'nyye trassy (Optical refraction in the earth's atmosphere. Horizontal paths). Edited by V.Ye. Zuyev (78). Novosibirsk, Nauka, 1982, 160 p.

792. Bayborodin, Yu.V. (0). Osnovy lazernoy tekhniki (Basics of laser engineering). Kiyev, Vyshcha shkola, 1981, 407 p. (RZhF, 4/82, 4A41)

793. Belyakov, V.A., and A.S. Sonin (0). Optika kholestericheskikh zhidkikh kristallov (Optics of cholesteric liquid crystals). Moskva, Nauka, 1982, 360 p.

794. Demchuk, M.I., and M.A. Ivanov (87). Statisticheskiy odnokvantovyy metod v optiko-fizicheskom eksperimente (Statistical single-quantum method in optophysical experiments). Belorusskiy GU. Minsk, 1981, 176 p. (TVKE, 30/82, 362)

795. Fabelinskiy, I.L. (0). K istorii otkrytiya kombinatsionnogo rasseyaniya (History of the discovery of Raman scattering). Novoye v zhizni, nauke, tekhnike. Seriya "Fizika", no. 1. Moskva, Znaniye, 1982, 64 p. (KL, 17/82, 14221)

796. Gelts, Yu.I., and A.K. Popov (0). Lazernove indutsirovaniye nelineynykh rezonansov v sploshnykh smezhnykh sredakh (Laser induced nonlinear resonances in complex contiguous media). Novosibirsk, Nauka, 1981, 154 p. (TVKE, 30/82, 344)

797. Gologaficheskaya obrabotka informatsii s ispol'zovaniyem nestatsionarnykh poley (Holographic information processing by transient fields). Fizicheskiy institut AN SSSR. Trudy, no. 131. This issue edited by M.M. Sushchinskiy (1). Moskva, Nauka, 1982, 152 p.

798. Gologaficheskiye metody khraneniya i obrabotki informatsii (holographic methods for information storage and processing). Frunzinskiy politekhnicheskiy institut. Sbornik nauchnykh trudov. Edited by A. Akayev (332). Frunze, 1981, 110 p. (RZhRadiot, 4/82, 4Ye642)

799. Karpman, I.M., M.N. Libenson, and Ye.B. Yakovlev (0). Lazernaya termolitografiya v proizvodstve integral'nykh skhem (Laser thermolithography in the production of integrated circuits). Leningrad, LDNTP, 1981, 26 p. (KL, 11/82, 9392)

800. Kombinatsionnoye rasseyaniye sveta i dinamika kristallicheskoy reshetki (Raman scattering and the dynamics of a crystal lattice). Fizicheskiy institut AN SSSR. Trudy, no. 132. This issue edited by M.M. Sushchinskiy (1). Moskva, Nauka, 1982, 225 p.

801. Kudrin, A.B., P.I. Polukhin, and N.A. Chichenev (0). Golografiya i deformatsiya metallov (Holography and metal deformation). Moskva, Metallurgiya, 1982, 152 p.

802. Protsessy perenosa energii v parakh metallov (Energy transfer processes in metal vapor). Latviyskiy GU. Mezhvedomstvenyy sbornik nauchnykh trudov. Edited by E.K. Kraulin' (109). Riga, 1981, 194 p. (RZhF, 4/82, 4D657)

803. Rasprostraneniye sveta v dispersnoy srede (Propagation of light in a disperse medium). Edited by A.P. Ivanov (3). Institut fiziki AN BSSR. Minsk, Nauka i tekhnika, 1982, 320 p.

804. Rinkevichyus, B.S., and G.M. Yanina (19). Osnovy lazernoy interferometrii i anemometrii. Primeneneniye kvantovykh priborov (Basics of laser interferometry and anemometry. Application of quantum instruments). Edited by V.A. Fabrikant (19). Moskovskiy energeticheskiy institut. Moskva, 1981, 36 p. (KL, 11/82, 9396)

805. Sovremennyye problemy matematicheskoy fiziki i vychislitel'noy matematiki (Current problems in mathematical physics and computer mathematics). In honor of the 60th birthday of A.A. Samarskiy (71). Edited by A.N. Tikhonov (71). Institut prikladnoy matematiki AN SSSR. Moskva, Nauka, 1982, 340 p.

806. Spektroskopicheskiye svoystva soyedineniy elementov IVB-gruppy (Spectroscopic properties of compounds of elements of the IVB group). Saratovskiy gos pedagogicheskiy institut (673). Sbornik nauchnykh trudov. Saratov, 1981, 93 p. (RZhF, 4/82, 4D464)

807. Tochnoye vremya i kvantovaya elektronika. Informatsionnyy byulleten' o literature, postupivshey v Biblioteku AN SSSR i biblioteki yeye seti (Precise time and quantum electronics. Information bulletin on literature at the Library of the Academy of Sciences, USSR, and its affiliated libraries). Compiled by Zh.I. Dolgatova, V.P. Kapralov, and L.A. Khvoshchevskaya (163). Edited by V.Ye. Privalov and V.P. Kapralov (163). Biblioteka AN SSSR. VNII metrologii. Leningrad, 1982. No. 29 covers January-June 1981, 171 p. No. 30 covers July-December 1981, 207 p.

808. Troitskiy, I.N., and N.D. Ustinov (0). Statisticheskaya teoriya golografii (Statistical theory of holography). Moskva, Radio i svyaz', 1981, 327 p. (RZhF, 3/82, 3D1033)

809. Tuchin, V.V. (45). Fluktuatsii v gazovykh lazerakh (Fluctuations in gas lasers). Part 1. Saratovskiy GU. Saratov, 1981, 61 p. (RZhF, 3/82, 3D1284)

810. Turbulentnyye dvukhfaznyye techeniya. IV Vsesoyuznoye nauchnoye soveshchaniye po teoreticheskim i prikladnym aspektam turbulentnykh techeniy. Tezisy dokladov (Turbulent two-phase flows. Fourth All-Union Scientific Conference on the Theoretical and Applied Aspects of Turbulent Flows. Summaries of the reports). Part 1. Edited by M.K. Laats (307). Institut termofiziki i elektrofiziki AN EstSSR. Tallin, 1982, 192 p.

811. Vagner, Ye.T. (0). Lazery v samoletostroyenii (Lasers in aircraft manufacture). Moskva, Mashinostroyeniye, 1982, 184 p.

812. Varfolomeyev, A.A. (23). Lazery na svobodnykh elektronakh i perspektivy ikh razvitiya. Obzor (Free electron lasers and prospects for their development. Survey). Institut atomnoy energii. Moskva, 117 p. (TVKE, 29/82, 354)

813. I Vsesoyuznaya mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya "Opticheskiye i radiovolnovyye metody i sredstva nerazrushayushchego kontrolya kachestva materialov i izdeliy", Fergana, 26-30 oktyabrya 1981. Tezisy dokladov (First All-Union Interscholastic Scientific and Technical Conference on Optical and Radiowave Methods and Means for Nondestructive Quality Control of Materials and Products, Fergana, 26-30 Oct 1981. Summaries of the reports). Ferganskiy politekhnicheskiy institut (674). Fergana, 1981. Part 1, 313 p. (RZhF, 3/82, 3D1031). Part 2, 325 p. (RZhF, 4/82, 4D1076)

814. IV Vsesoyuznoye soveshchaniye "Eksperimental'nyye metody i apparatura dlya issledovaniya turbulentnosti", Novosibirsk, 30 sentyabrya - 2 oktyabrya 1981. Tezisy dokladov (Fourth All-Union Conference on Experimental Methods and Apparatus for Studying Turbulence, Novosibirsk, 30 Sep - 2 Oct 1981. Summaries of the reports). Institut teplofiziki SOAN (159). Novosibirsk, 1981, 161 p. (TVKE, 30/82, 161)

815. IV Vsesoyuznoye soveshchaniye po fotokhimii, Leningrad, 18-20 noyabrya 1981. Tezisy dokladov (Fourth All-Union Conference on Photochemistry, Leningrad, 18-20 Nov 1981. Summaries of the reports). Gosudarstvennyy opticheskiy institut (7). Leningrad, 1981, 364 p. (RZhF, 3/82, 3D552)

816. V Vsesoyuznoye soveshchaniye po nerezonansnomu vzaimodeystviyu opticheskogo izlucheniya s veshchestvom, Leningrad, 1-4 dekyabrya 1981. Tezisy dokladov (Fifth All-Union Conference on Nonresonant Interaction of Optical Radiation with Matter, Leningrad, 1-4 Dec 1981. Summaries of the reports). Edited by L.N. Kaporskiy (0). Leningrad, 1981, 393 p. (RZhF, 3/82, 3D1350)

817. V Vsesoyuznoye soveshchaniye po radiometeorologii, Kishinev, 15-19 maya 1978. Trudy (Fifth All Union Conference on Radiometeorology, Kishinev, 15-19 May 1978. Proceedings). Edited by A.A. Chernikov, and V.Yu. Mel'nichuk (0). Moskva, Gidrometeoizdat, 1981, 332 p. (RZhF, 3/82, 3Zh152)

818. VII Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhennykh chastits, Dubna, 14-16 oktyabrya 1980. Trudy (Seventh All-Union Conference on Charged Particle Accelerators, Dubna, 14-16 Oct 1980. Proceedings). Vol. 1. Edited by A.A. Vasil'yev (52). Ob"yedinennyy institut yadernykh issledovaniy. Dubna, 1981, 368 p. (RZhF, 4/82, 4V360)

819. Zhabotinskiy, M.Ye. (0). Svyaz' budushchego (Communications of the future). Novoye v zhizni, nauke, tekhnike. Seriya "Radioelektronika i svyaz'", no. 1. Moskva, Znaniye, 1982, 64 p. (KL, 18/82, 15192)

820. Zuyev, V.Ye., and I.E. Naats (78). Obratnyye zadachi lazernogo zondirovaniya atmosfery (Inverse problems in laser probing of the atmosphere). Edited by M.V. Kabanov (78). Novosibirsk, Nauka, 1982, 242 p.

IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APP	(APTLB)	Acta physica polonica
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
CCF	(CKCFA)	Ceskoslovensky casopis pro fyziku
CJP	(CZYPA)	Czechoslovak Journal of Physics
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
DR	(DERUB)	Deponirovannyye rukopisi
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
FM	(FNMKA)	Finommechanika, mikrotechnika [Hungary]
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Est	(ETFMB)	Akademiya nauk Estonskoy SSR. Izvestiya. Fizika, matematika
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk

I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
JMO	(JMKOA)	Jemna mechanika a optika
JTP	(JTPHD)	Journal of Technical Physics [Poland]
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDVAD	(-----)	Knizhnaya letopis'. Dopolnitel'nyy vypusk. Avtoreferaty dissertatsii
Kristal	(KRISA)	Kristallografiya
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizika
NM	(IVNMA)	Akademiya nauk SSSR. *Izvestiya. Neorganicheskiye* materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Opt app	(OPAPB)	Optica applicata [Poland]
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research (B). Basic Research
PSU	(PRSUB)	Pribory i sistemy upravleniya
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RRP	(RRPZA)	Revue Roumaine de physique

RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	sbornik	Elektronnaya promyshlennost', no. 5-6, 1981
Sb2		Wissenschaftliche Zeitschrift der Humboldt-Universitat zu Berlin, Mathematisch-naturwissenschaftliche, Reihe, no. 1, 1981
Sb3		Radiofizika i issledovaniya svoystv veshchestva, Omsk, 1981
Sb4		15th International Conference on Phenomena in Ionized Gases. Minsk, 14-18 July 1981. Proceedings. Contributed papers. Part 2. Place and year of publication not given.
Sb5		15th International Conference on Phenomena in Ionized Gases. Minsk, 14-18 July 1981. Proceedings. Contributed papers. Part 1. Place and year of publication not given.
Sb6		Turbulentnyye dvukhfaznyye techeniya. Vsesoyuznoye nauchnoye soveshchaniye po teoreticheskim i prikladnym aspektam turbulentnykh techeniy. 4th. Tezisy dokladov. Part 1. Tallin, 1982
Sb7		Povysheniye kachestva i dolgovechnosti slozhnykh sistem v mashinakh i oborudovanii metodami tekhnicheskoy diagnostiki. Khabarovsk, 1981
Sb8		Studenticheskaya nauchno-tekhnicheskaya konferentsiya vuzov pribalticheskikh respublik, BSSR i MSSR. 25th. 21-23 April 1981. Tezisy dokladov. Vol. 1, Tallin, 1981
Sb9		Fizicheskiye protsessy v priborakh elektronnoy i lazernoy tekhniki. Moskovskiy fiziko-tekhnicheskiy institut. Mezhduvedomskiy sbornik. Moskva, 1981
Sb10		Fizika i tekhnologiya tonkikh plenok slozhnykh poluprovodnikov. Ukrainskaya respublikanskaya konferentsiya. 4th. Tezisy dokladov Uzhgorod, 1981
Sb11		Peredacha, priyem i obrabotka informatsii. Voronezh, 1981
Sb12		Nauchnaya konferentsiya molodykh uchenykh Kazakhskogo universiteta, posvyashchennoy 26 s"yezdu Kompartii Kazakh-

stana, Alma-Ata, 15-17 Apr 1981. Trudy Kazakhskiy G U, Alma-Ata, 1981. Deposit at KazNIINTI, no. R304, 15 Dec 1981

Sb13 Poverkhnost'. Fizika, khimiya, mekhanika, no. 1, 1982

Sb14 Sovremennyye problemy matematicheskoy fiziki i vychislitel'noy matematiki. Institut prikladnoy matematiki AN SSSR. Moskva, Nauka, 1982

Sb15 Izvestiya otdeleniya khimicheskikh nauk Bolgarskoy akademii nauk, no. 4, 1980

Sb16 Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhennykh chastits. 7th. Dubna, 14-16 Oct 1980. Trudy. Ob"yedinennyy institut yadernykh issledovaniy, Dubna, 1981

Sb17 Fazirovannyye antennyye reshetki. Moskva, 1981

Sb18 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 6th. Tezisy dikladov. Part 1. Institut optiki atmosfery SOAN. Tomsk, 1981

Sb19 Vsesoyuznoye soveshchaniye po radiometeorologii. 5th. Kishinev, 15-19 May 1978, Trudy. Moskva, Gidrometeoizdat, 1981

Sb20 Rasprostraneniye sveta v dipsersnoy srede. Institut fiziki AN BSSR. Minsk, Nauka i tekhnika, 1982

Sb21 Effektivnost' sistem obrabotki radiolokatsionnoy informatsii. Moskva, 1981

Sb22 Astrometriya i astrofizika, no. 42, 1980

Sb23 Issledovaniye vysokoshirotnoy ionosfery i magnetosfery zemli. Polyarnyy geofizicheskiy institut Kol'skogo filiala AN SSSR. Leningrad, Nauka, 1982

Sb24 Vychislitel'nyye sistemy, no. 84, Novosibirsk, 1981

Sb25 Fundamental'nyye osnovy opticheskoy pamyati i sredy, no. 12, Kiyev, 1981

Sb26 Izvestiya na NII po material'no-tekhnicheska baza kul'turata, no. 15, 1979

Sb27 Novyye elementy i metody rascheta informatsionnykh sistem. Moskva, 1980.

Sb28 Metrologiye i tochnyye izmereniya, no. 1, 1981

Sb29 Izmereniye parametrov formy i spektra radiotekhnicheskikh signalov. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya, 20-22 Oct 1981. Tezisy dokladov. Khar'kov, 1981

Sb30 Elektronnaya promyshlennost', no. 7-8, 1981

Sb31 Vsesoyuznoye soveshchaniye "Eksperimental'nyye metody i apparatura dlya issledovaniya turbulentnosti." 4th. Novosibirsk, 30 Sep - 2 Oct 1981. Tezisy dokladov. Institut teplofiziki SOAN. Novosibirsk, 1981

Sb32 Diagnostika plazmy, no. 4/1, Moskva, 1981

Sb33 Elektronnaya tekhnika. Seriya 8. Upravleniye kachestvom, metrologiya, standartizatsiya, no. 3, 1981

Sb34 Soveshchaniye po yadernoy spektroskopii i struktura atomnogo yadra, 32nd. Kiyev, 16-18 March 1982. Tezisy dokladov. Leningrad, Nauka, 1982

Sb35 Problemy vysshey shkoly, no. 44, Kiyev, 1981

Sb36 Issledovaniya v oblasti izmereniy geometricheskikh velichin. Moskva, 1981

Sb37 Avtoionizatsionnyye yavleniya v atomakh. Nauchnyy seminar. 2nd. Moskva, 1980, Trudy. Moskva, 1981

Sb38 Fizicheskaya elektronika, no. 23, L'vov, 1981

Sb39 Nauchyye pribory, no. 24, Moskva, 1981

Sb40 Acta Universitatis Palackianae Olomucensis. Facultas rerum naturalium. Physica, v. 65, 1980

Sb41 Konferentsiya molodykh uchenykh. 8th. Materialy. Geokhimiya i poleznyye iskopayemyye. Moskovskiy G U, Moskva, 1981. Deposit at VINITI, no. 92-82, 7 Jan 1982

Sb42 Teoreticheskiye problemy khimicheskoy fiziki. Moskva, Nauka, 1982

Sb43 Diagnostika plazmy, no. 4/2, Moskva, 1981

Sb44 Ucheniye zapiski TsAGI, no. 5, 1981

Sb45 Elektronnaya tekhnika. Seriya 1. Elektronika SVCh, no. 3, 1981

Sb46 Tenth European Conference on Controlled Fusion and Plasma Physics, Moscow, 14-19 Sep 1981. Vol. 1. Contributed papers. Moskva, 1981.

SCF	(SCEFA)	Studii si cercetari de fizica
TiEKh	(TEKHA)	Teoreticheskaya i eksperimantal'naya khimiya
TiMF	(TMFZA)	Teoreticheskaya i matematicheskaya fizika
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	Trudy	Kiyevskiy politekhnicheskiy institut. Vestnik. Radioelektronika, no. 18, 1981
Tr2		Fizicheskiy institut AN SSSR. Trudy, no. 132, 1982
Tr3		VNII monokristallov, stsintilyatsionnyk materialov i osobo chistykh khimicheskikh veshchestv, Sbornik nauchnykh trudov, no. 7, 1981
Tr4		Institut eksperimental'noy meteorologii. Gosudarstvennyy komitet SSSR po gidrometeorologii i kontrolyu prirodnoy sredy. Trudy, no. 26/99, 1981
Tr5		Fizicheskiy institut AN SSSR. Trudy, no. 131, 1982
Tr6		Kiyevskiy G U. Vestnik. Fizika, no. 22, 1981
TVKE	(TVKED)	Tochnoye vremya i kvantovaya elekronika
TVT	(TVYTA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskiy nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZETFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhFKh	(ZFKHA)	Zhurnal fizicheskoy khimii
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhNKh	(ZNOKA)	Zhurnal neorganicheskoy khimii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki
ZhVMMF	(ZVMFA)	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki

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 gosudarstvennyy universitet).
3. Institute of Physics, AN BSSR, Minsk (Institut fiziki AN BSSR).
4. Physicotechnical Institute im Ioffe, Leningrad (Fiziko-tekhnicheskiy institut im Ioffe).
5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR).
6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR).
7. State Optical Institute im Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im Vavilova).
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