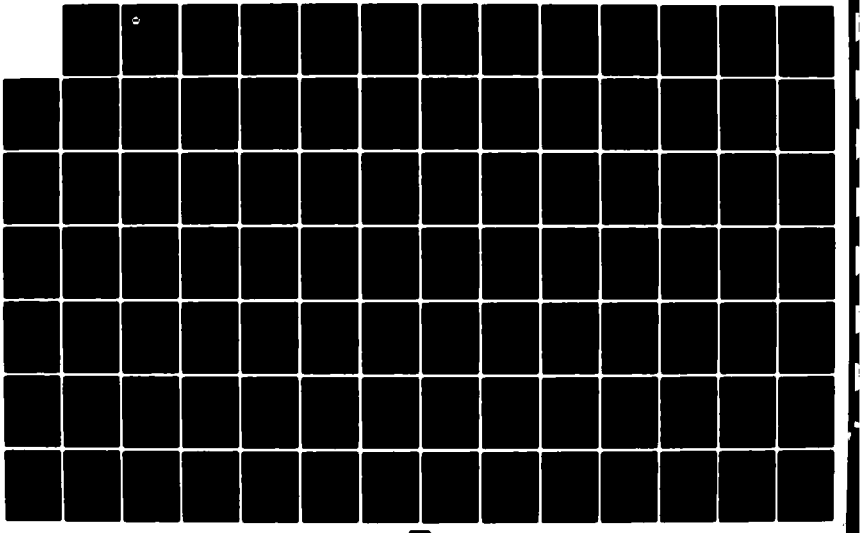
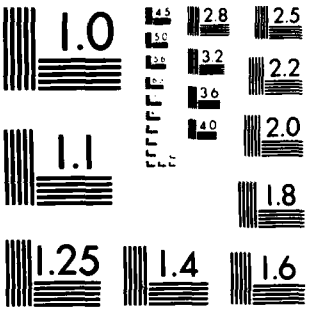
AD-A133 932 BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS NUMBER 60 1/2
JULY - AUGUST 1982(U) DEFENSE INTELLIGENCE AGENCY
WASHINGTON DC DIRECTORATE FOR SCI.. 15 JUL 83
UNCLASSIFIED DIA-DST-2700Z-006-83 F/G 5/2 NL





DST-2700Z-006-83

12

DEFENSE
INTELLIGENCE
AGENCY

Bibliography of Soviet Laser Developments (U)

July-August 1982

AUGUST 1983

DST-2700Z-006-83

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 60

JULY - AUGUST 1982

Date of Report

July 15, 1983

Vice Director for Foreign Intelligence
Defense Intelligence Agency

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

Comments should be addressed to the Defense Intelligence Agency, Directorate for Scientific and Technical Intelligence, ATTN: DT-5A.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DST-2700Z-006-83	2. GOVT ACCESSION NO. AD-A133432	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, No. 60 JULY - AUGUST 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		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE July 15, 1983
		13. NUMBER OF PAGES 121
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, X-Ray 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 July-August 1982, and is No. 60 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.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

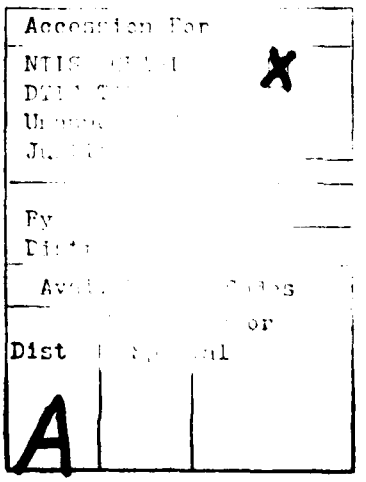
UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is July-August 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.



SOVIET LASER BIBLIOGRAPHY, JULY - AUGUST 1982

TABLE OF CONTENTS

I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Boyko, V.A., G.A. Koldashov, A.Ya. Fayenov, V.V. Ragul'skiy, A.I. Fedosimov, and I.N. Tsigler (0). High-power ruby laser with a Brillouin scattering mirror for producing high-temperature plasma. KE, no. 7, 1982, 1513-1515.

2. Crystal: Rare-Earth Activated

a. Nd^{3+}

2. Basov, N.G., N.Ye. Bykovskiy, V.V. Ivanov, V.I. Kozlovskiy, A.S. Nasebov, Yu.V. Senatskiy, and G.V. Sklizkov (1). Pulsed selective pumping of high-power Nd laser active elements. KSpF, no. 8, 1982, 54-59.

3. Brekhov, O.M., V.B. Lebedev, V.I. Prokhorenko, B.M. Stepanov, Ye.A. Tikhonov, G.I. Chuvasov, and M.T. Shpak (0). Electrooptic recording of subpicosecond structural fluctuations in neodymium laser radiation. KE, no. 7, 1982, 1471-1473.

4. Grigor'yants, V.V., M.Ye. Zhabotinskiy, and V.M. Markushev (15). Determining the relaxation probability for the $^4I_{11/2}$ level population of neodymium ions, using the luminescence cutoff in a small external sample. KE, no. 8, 1982, 1576-1580.

5. Kamarzin, A.A., A.A. Mamedov, V.A. Smirnov, A.A. Sobol', V.V. Sokolov, and I.A. Shcherbakov (1). Population of an upper level of neodymium in γ-La_2S_3 semiconductor crystals and $La_2S_3 \cdot 2Ga_2O_3$ glass. Fizicheskiy institut AN SSSR. Preprint, no. 235, 1982, 12 p.

6. Kaminskiy, A.A., S.E. Sarkisov, B.V. Mill', and G.G. Khodzhabagyan (13,2). New inorganic material with high concentrations of Nd^{3+} ions for generation of stimulated emission at $^4F_{3/2} \rightarrow {}^4I_{11/2}$ and $^4F_{3/2} \rightarrow {}^4I_{13/2}$ transitions. NM, no. 8, 1982, 1396-1397.

7. Kaminskiy, A.A., V.A. Timofeyeva, N.R. Agamalyan, and A.B. Bykov (13). IR lasing from NaGdGeO-Nd^{3+} crystals grown by a solution-melt method. Kristal, no. 3, 1982, 522-527.

8. Kubecek, V., and K. Pechacova (NS). Continuously pumped acousto-optically Q-switched Nd:YAG laser. CCF, v. A32, no. 1, 1982, 59-64. (RZhF, 8/82, 8D1239)

9. Zverev, G.M., I.I. Kuratev, and A.V. Shestakov (0). Solid state microlasers using crystals with high concentrations of neodymium ions. IAN Fiz, no. 8, 1982, 1561-1566.

b. Er^{3+}

10. Antipenko, B.M., A.A. Mak, O.B. Raba, B.V. Sinitsyn, and T.V. Uvarova (0). Mechanism of stepped sensitizing of $^4F_{9/2} \rightarrow {}^4I_{11/2}$ and $^4F_{9/2} \rightarrow {}^4I_{13/2}$ lasing transitions of Er^{3+} ions in $BaYb_2F_8$ crystals. KE, no. 8, 1982, 1614-1619.

11. Bagdasarov, Kh.S., V.I. Zhekov, V.A. Lobachev, A.A. Manenkov, T.M. Murina, A.M. Prokhorov, and Ye.A. Fedorov (1,13). Yttrium erbium aluminum garnet: a new prospective crystal for IR lasers.

3. Crystal: Miscellaneous

12. Basiyev, T.T., Yu.K. Voron'ko, S.B. Mirov, V.V. Osiko, and A.M. Prokhorov (1). Solid-state tunable lasers using color centers in ionic crystals. IAN Fiz, no. 8, 1982, 1600-1610.

13. Basiyev, T.T., Yu.K. Voron'ko, S.B. Mirov, V.V. Osiko, A.M. Prokhorov, M.S. Soskin, and V.B. Taranenko (1). Efficient tunable lasers based on LiF:F_2 crystals. KE, no. 8, 1982, 1741-1743.

14. Galkin, S.L., A.L. Zakgeym, V.M. Marakhonov, V.M. Nikolayev, A.A. Pavlyuk, I.P. Petrovich, V.Yu. Petrun'kin, A.P. Shkadarevich, and V.D. Yarzhemkovskiy (0). $KGd(WO_4)_2$ crystal laser with a semiconductor pump system. ZhPS, v. 37, no. 2, 1982, 215-217.

15. Ganapol'skiy, Ye.M. (84). Stimulated emission of photons and phonons in GaAs:Fe^{2+}. ZhTF, no. 7, 1982, 1455-1456.

16. Georgobiani, A.N., M.V. Glushkov, A.A. Kamarzin, Ye.S. Logozinskaya, Yu.N. Malovitskiy, Zh.A. Pukhliy, V.V. Sokolov, I.M. Tiginyanu, and I.A. Shcherbakov (1). Study on photoelectric and luminescent properties of γ-La_2S_3 single crystals. KE, no. 7, 1982, 1515-1517.

17. Kuz'minov, Yu.S., V.V. Osiko, I.V. Sil'verstova, and O.K. Chusovitina (1). Optical and lasing properties of varied composition barium sodium niobate crystals. KE, no. 7, 1982, 1491-1493.

18. Mollenauer, L.F. (NS). Progress in color center lasers. Sb 1, 524-541. (RZhF, 8/82, 8D1241)

19. Podgornyy, A.P. (3). Stimulated emission from impurity molecular crystals at 4.2 K. Institut fiziki AN BSSR. Dissertation, 1981, 28 p. (KLDVAD, 8/82, 12141)

20. Zharikov, Ye.V., V.V. Laptev, Ye.I. Sidorova, Yu.P. Timofeyev, and I.A. Shcherbakov (1). Absolute quantum yield of Cr^{+} ion luminescence in gadolinium-gallium and gadolinium-scandium-gallium garnet crystals. KE, no. 8, 1982, 1740-1741.

4. Semiconductor

a. GaAs

21. Suris, R.A., and S.V. Shtofich (0). Multifrequency lasing in injection semiconductor lasers. FTP, no. 7, 1982, 1327-1330.

b. CdS

22. Fomichev, A.A., and M.A. Yakshin (118). Submillimeter emission from CdS crystals under the effect of intense optical pumping. ZhTF P, no. 15, 1982, 903-907.

23. Obidin, A.Z., A.N. Pechenov, Yu.M. Popov, V.A. Frolov, and R.F. Nabiyev (1). Space-time and power characteristics of a CdS streamer semiconductor laser. KE, no. 8, 1982, 1530-1535.

c. $In_{1-x}Ga_xAs$

24. Aliyev, M.I., and Kh.A. Khalilov (60). Effect of disorder on the electrical properties of $In_{1-x}Ga_xAs$ crystals. DAN Za, no. 7, 1982, 24-28.

d. $Pb_{1-x}Ge_xTe$

25. Kurbatov, A.L., N.D. Polchkova, P.M. Starik, and M.V. Shubin (0). Thermal dependence of stimulated emission delay in $Pb_{1-x}Ge_xTe$ injection lasers. FTP, no. 8, 1982, 1485-1486.

e. $Pb_{1-x}Sn_xTe$

26. Vlasov, A.N., V.I. Stafeyev, A.I. Uvarov, Ye.M. Kistova, A.N. Likholetov, and M.A. Konstantinova (0). Cathode luminescence of epitaxial layers of $Pb_{1-x}Sn_xTe$ with a composition gradient in the growth plane. KE, no. 7, 1982, 1486-1488.

f. Miscellaneous Heterojunction

27. Alferov, Zh.I., K.G. Khalandarishvili, Yu.V. Koval'chuk, Ye.L. Portnoy, and V.B. Smirnitskiy (4). Distributed feedback heterolaser produced by interference laser annealing. ZhTF P, no. 13, 1982, 769-772.

28. Andreyeva, Ye.A., V.I. Borodulin, M.V. Zverkov, V.P. Konyayev, Ye.R. Novikova, S.A. Pashko, V.A. Simakov, Ye.G. Faynboym, and V.I. Shveykin (161). Integrated laser — photodetector pair. ZhTF, no. 7, 1982, 1457-1458.

29. Bogatov, A.P., M.G. Vasil'yev, P.G. Yeliseyev, O.G. Okhotnikov, G.T. Pak, M.P. Rakhval'skiy, K.A. Khayretdinov, N.P. Chernousov, and V.I. Shveykin (1). Tunable c-w lasing in the 1.3 μm region in a GaInPAs/InP heterolaser with an external resonator. KE, no. 7, 1982, 1504-1506.

30. Bogatov, A.P., P.G. Yeliseyev, O.G. Okhotnikov, G.T. Pak, M.P. Rakhval'skiy, and K.A. Khayretdinov (1). C-w lasing in an injection laser with a ring resonator. ZhTF P, no. 13, 1982, 799-803.

31. Gurevich, S.A., Ye.L. Portnoy, M.E. Raykh, B.S. Ryvkin, F.N. Timofeyev, and K. Fronts (4). Bistable operation of a semiconductor laser. ZhTF P, no. 14, 1982, 879-883.

32. Okhotnikov, O.G. (1). Study on the radiative and electrophysical characteristics of planar stripe-geometry AlGaAs heterolasers and the characteristics of spectrally tunable lasing. Fizicheskiy institut AN SSSR. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 10410)

g. Theory

33. Belyayev, S.A., O.V. Bogdankevich, S.A. Darznek, M.M. Zverev, V.F. Pevtsov, V.A. Ushakhin, and V.K. Yakushin (626). E-beam pumped multielement semiconductor laser in the visible range. KE, no. 8, 1982, 1732-1733.

34. Bratchikov, A.N., and A.Yu. Grinev (0). Coupled synchronization of semiconductor injection lasers in multimode operation. IVUZ Radioelektr, no. 8, 1982, 43-51.

35. Logginov, A.S., and Yu.F. Yul'berdin (0). Limit possibilities for optimal conditions for modulation of injection laser radiation. Radiotekhnika, no. 4, 1982, 21-24. (RZhRadiot, 7/82, 7Ye77)

36. Mikayelyan, G.T. (1). Effect of the resonator and of inhomogeneities in dielectric permittivity on the characteristics of an injection laser. Fizicheskiy institut AN SSSR. Dissertation, 1981, 15 p. (KLDVAD, 7/82, 10397)

37. Valakh, M.Ya., and M.P. Lisitsa (6). Phonons in A^2B^6 semiconductors. Review. Sb 2, 16-48.

5. Glass: Nd

38. Agashkov, A.V., and Yu.F. Morgun (0). Generating a series of narrow-band giant pulses in a laser with an electrooptic Q-switch. ZhPS, v. 37, no. 1, 1982, 42-48

39. Denker, B.I., N.N. Il'ichev, and A.A. Malyutin (1). Concentrated laser glass. Application possibilities. IAN Fiz, no. 8, 1982, 1567-1572.

40. Denker, B.I., N.N. Il'ichev, A.A. Malyutin, and P.P. Pashinin (1). Laser-pumped neodymium phosphate glass generator of nanosecond laser pulses. KE, no. 8, 1982, 1733-1735.

41. Dzhibladze, M.I., and L.Ye. Lazarev (40). Some lasing characteristics of neodymium whisker lasers. AN GruzSSR. Soobshcheniya, v. 107, no. 2, 1982, 277-280.

42. Kryzhanovskiy, V.I., V.A. Serebryakov, and V.Ye. Yashin (0). Experimental study on a two-pass neodymium laser amplifier with four-wave decoupling and a Brillouin scattering mirror. ZhTF, no. 7, 1982, 1356-1361.

43. Leont'yev, V.M., S.F. Sitnikov, and V.I. Sokolov (23). Single-frequency giant pulsed neodymium phosphate glass laser with active Q-switching. PTE, no. 4, 1982, 199-202.

44. Mikhnov, S.A., A.N. Khodinskiy, and V.A. Kononov (0). Optimizing the efficiency of lasers with passive Q-switches. ZhPS, v. 37, no. 2, 1982, 227-230.

6. Glass: Miscellaneous

45. Basiyev, T.T., B.I. Denker, N.N. Il'ichev, A.A. Malyutin, S.B. Mirov, V.V. Osiko, and P.P. Pashinin (1). Concentrated Li-Nd-La phosphate glass laser with a passive Q-switch. KE, no. 8, 1982, 1536-1542.

46. Malashkevich, G.Ye., V.N. Tadeush, V.V. Kuznetsova, Kh.A. Cherches, N.I. Bliznyuk, V.G. Mikhalevich, and M.B. Rzhevskiy (0). Physico-chemical and spectral luminescent properties of SiO_2-Al_2O_3-La_2O_3-Nd_2O_3 system glass. ZhPS, v. 37, no. 2, 1982, 261-265.

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

47. Akimov, A.I., L.V. Levshin, A.M. Saletskiy, and V.I. Yuzhakov (0). Lasing characteristics of rhodamine 6G and coumarin-47 solutions during inhomogeneous spectral broadening. ZhPS, v. 37, no. 2, 1982, 236-241.

48. Kachanov, A.A. (72). Birefringent lasing wavelength selector for a c-w dye laser. KE, no. 7, 1982, 1458-1462.

49. Mkhitaryan, V.M., and Kh.V. Partamyan (59). Pumping rhodamine 6G in an etalon by electrical breakdown of the solution. KE, no. 8, 1982, 1713-1715.

b. Miscellaneous Dyes

50. Afanas'yev, A.A., V.A. Batyrev, and M.V. Korol'kov (0). Effect of the development of a thermal lattice on the lasing linewidth for distributed feedback dye lasers. ZhPS, v. 37, no. 2, 1982, 230-233.

51. Asimov, M.M., V.N. Gavrilenko, and A.N. Rubinov (0). Lasing characteristics of deoxygenated laser dye solutions. ZhPS, v. 37, no. 1, 1982, 49-54.

52. Bezrodnyy, V.I., and Ye.A. Tikhonov (5). Efficient lasing from dyes under linearly and circularly polarized pumping. UFZh, no. 8, 1982, 1143-1146.

53. Borisevich, N.A., V.A. Tolkachev, V.Ya. Tulach, and M.K. Khitrun (0). Complex molecular vapor laser with a self-pumping active medium. ZhPS, v. 37, no. 2, 1982, 209-214.

54. Povedaylo, V.A. (0). Optimizing the lasing efficiency of a POPOP vapor laser. ZhPS, v. 37, no. 2, 1982, 217-223.

55. Tikhonov, Ye.A. (5). Cholesteric liquid crystal lasers with distributed feedback and reflection. Sb 2, 3-16.

56. Zinov'yev, P.V., Yu.V. Naboykin, S.V. Lopina, V.V. Samartsev, and N.B. Silayeva (36). Self-induced transparency caused by intrinsic stimulated emission from pyrene. IAN Fiz, no. 8, 1982, 1486-1490.

2. Inorganic Liquids

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

57. Bakayev, D.S., Yu.A. Vdovin, I.V. Yevseyev, V.M. Yermachenko, and P.I. Kuz'min (0). Mode competition in mixed transitions in an He-Ne laser at 3.3922 and 3.912 μm. Sb 3, 43-57. (RZhRadiot, 8/82, 8Ye46)

58. Gonchukov, S.A., V.M. Yermachenko, and S.V. Kireyev (16). Study on a two-mode He-Ne laser with an anisotropic resonator and a neon absorption cell at 0.63 μm. Deposit at VINITI, no. 2016-82, 26 Apr 1982, 11 p. (DR, 8/82, 389)

59. Gudelev, V.G., and V.M. Yasinskiy (3). Two-frequency He-Ne laser in a transverse magnetic field. KE, no. 7, 1982, 1420-1428.

b. He-Xe

60. Bokhan, P.A., and A.R. Sorokin (159). Pumping of gas lasers by traveling electron beams. ZhTF P, no. 15, 1982, 947-950.

61. Bychkov, Yu.I., S.V. Mel'chenko, V.F. Tarasenko, and A.I. Fedorov (466). Quasi-c-w lasing in an He-Xe-HCl mixture with electric discharge pumping. KE, no. 7, 1982, 1481-1483.

c. He-Kr

62. Voinov, A.M., L.Ye. Dovbysh, V.N. Krivonosov, S.P. Mel'nikov, I.V. Podmoshenskiy, and A.A. Sinyanskiy (0). High-pressure helium-krypton laser pumped by products of uranium fission. ZhTF, no. 7, 1982, 1346-1350.

d. Ar-Xe

63. Bychkov, Yu.I., V.F. Losev, V.F. Tarasenko, and Ye.N. Tel'minov (466). High-power lasing in an Ar:Xe mixture under microsecond e-beam pumping. ZhTF P, no. 14, 1982, 837-840.

2. Molecular Beam and Ion

a. CO_2

64. Bakarev, A.Ye., L.S. Vasilenko, and O.M. Skhimnikov (159). Gain in a waveguide CO_2 laser with an r-f electrodeless discharge. KE, no. 8, 1982, 1729-1731.

65. Barchenko, V.T., V.Kh. Goykhman, and A.V. Zadera (0). Degradation process of electrode elements in c-w CO_2 lasers. Sb 4, 34-36. (RZhRadiot, 7/82, 7Ye25)

66. Batyrbekov, G.A., A.O. Beysebayev, Sh.Kh. Gizatulin, V.A. Danilychev, A.A. Ionin, I.B. Kovsh, S.A. Kostritsa, and M.U. Khasenov (1,444). Study on electroionization CO and CO_2 lasers operating in the active zone of a stationary nuclear reactor. KE, no. 7, 1982, 1493-1496.

67. Bertel', I.M., V.O. Petukhov, S.A. Trushin, and V.V. Churakov (3). Effect of active medium composition on gain in the $00°2-[10°1,02°1]_1$ band in a TEA CO_2 laser with UV preionization. KE, no. 7, 1982, 1405-1414.

68. Bertel', I.M., V.O. Petukhov, B.I. Stepanov, S.A. Trushin, and V.V. Churakov (0). Study on the kinetics of vibrational temperatures in a TEA CO_2 laser. KE, no. 8, 1982, 1630-1638.

69. Bondarenko, A.I., I.V. Yelizarov, F.K. Kosyrev, V.G. Morozov, I.G. Persiantsev, V.D. Pis'mennyy, V.A. Timofeyev, and M.Ye. Fabrikov (23). Industrial c-w CO_2 laser with a self-terminating discharge. KE, no. 7, 1982, 1309-1313.

70. Bychkov, Yu.I., D.Yu. Zaroslov, N.V. Karlov, G.P. Kuz'min, V.V. Osipov, A.M. Prokhorov, and V.A. Tel'nov (1). Initiating a high-power self-terminating volumetric discharge in molecular gases by UV radiation from a plasma cathode. KE, no. 8, 1982, 1718-1721.

71. Chernov, Ye.A. (137). Recording the spatial mode structure of TEA CO_2 laser radiation by means of a thermooptic converter. ZhTF P, no. 16, 1982, 992-995.

72. Dan'shchikov, Ye.V., V.A. Dymshakov, F.V. Lebedev, and A.V. Ryazanov (23). Divergence of radiation from an electric discharge CO_2 laser with an unstable resonator. KE, no. 8, 1982, 1581-1585.

73. Generalov, N.A., V.P. Zimakov, V.D. Kosynkin, Yu.P. Rayzer, and N.G. Solov'yev (17). Selective operation fast-flow CO_2 industrial laser. KE, no. 8, 1982, 1549-1557.

74. Glotov, Ye.P., V.A. Danilychev, N.N. Sazhina, A.M. Soroka, and N.V. Cheburkin (1). Evaluating the energy characteristics of a periodic pulsed electroionization CO_2 laser with a cooled active medium. KE, no. 8, 1982, 1737-1740.

75. Grigor'yants, V.V., M.Ye. Zhabotinskiy, and B.A. Kuzyakov (15). Waveguide CO_2 laser with modulated parameters. KE, no. 7, 1982, 1496-1499.

76. Ivanchenko, A.I., and A.A. Shepelenko (193). Cathode loss in glow discharge potential in a CO_2 laser gas mixture and nitrogen at moderate pressures. TVT, no. 4, 1982, 636-641.

77. Likal'ter, A.A. (74). Vibrational kinetics of CO_2 during intense excitation of Fermi resonance. TVT, no. 4, 1982, 614-620.

78. Mitichkin, A.I., A.N. Panova, L.V. Udovichenko, and K.V. Shakhova (0). The nature of the absorption band in CsI crystals for the region of CO_2 laser radiation. ZhPS, v. 37, no. 2, 1982, 223-226.

79. Osipov, V.V. (466). High-pressure pulsed CO_2 lasers. Sb 5, 141-171.

80. Sinel'shchikov, V.A. (74). Discharge characteristics in an He-CO_2-Cs mixture and its effect on the rate of chemical bonding of cesium. TVT, no. 4, 1982, 627-635.

81. Yelov, V.V., V.A. Kuklin, N.S. Leshenyuk, and V.V. Nevdakh (3). Study on the active medium of a closed-cycle fast-flow CO_2 industrial laser. KE, no. 8, 1982, 1558-1565.

82. Zaroslov, D.Yu., R.Sh. Islamov, N.V. Karlov, I.O. Kovalev, Yu.B. Konev, G.P. Kuz'min, and A.M. Prokhorov (1). Evaluation of staged lasing on 00^01-02^00-01^10 transitions of CO_2 molecules under pumping in a pulsed gas discharge. KE, no. 8, 1982, 1721-1724.

b. CO

83. Bulavin, R.Ye., V.V. Buchanov, and E.I. Molodykh (118). Spectral composition of electroionization CO laser radiation. Deposit at VINITI, no. 1838-82, 15 Apr 1982, 7 p. (DR, 8/82, 393)

84. Bunkin, S.B., R.Sh. Islamov, Yu.B. Konev, and I.V. Kochetov (74). Efficient method for numerical evaluation of the kinetics of an anharmonic oscillator and its use for studying the effect of molecular isotopic composition on the characteristics of a CO active medium. KE, no. 7, 1982, 1442-1446.

c. Ar

85. Didenko, A.N., and S.S. Sulakshin (336). Feasibility of generating a traveling-wave laser beam. ZhTF, no. 7, 1982, 1422-1424.

d. N_2

86. Navrot, V., and L. Pokora (NS). N_2 laser-amplifier system for interferometric studies of a plasma. KE, no. 7, 1982, 1499-1503.

e. Metal Vapor

87. Batenin, M.V., A.A. Zayakin, and I.I. Klimovskiy (74). Effect of heating electrons in the recombination process for copper atoms on lasing parameters in copper halide vapor lasers. KE, no. 7, 1982, 1313-1317.

88. Mal'tsev, A.N. (78). Kinetics of periodic pulsed lasing in a copper vapor laser. Institut optiki atmosfery SOAN. Preprint, no. 1, 1982, 40 p. (RZhF, 8/82, 8D1186)

f. Gasdynamic

89. Bakanov, D.G., L.S. Korniyenko, A.I. Odintsov, and A.I. Fedoseyev (0). Simultaneous quasi-steady state lasing at 10.6 and 18.4 μm transitions in a gasdynamic CO_2 laser. ZhPS, v. 37, no. 2, 1982, 233-236.

90. Bogomolov, B.G., V.T. Karpukhin, D.S. Pinkhasik, et al (74). Experience in exploiting an experimental high-temperature regenerative heat-exchange gas heater for a CO_2 gasdynamic laser. Institut vysokikh temperatur AN SSSR. Preprint, no. 2-062, 1981, 33 p. (KL, 29/82, 26289)

91. Brunne, M., A. Zielinski, J. Milewski, A.A. Vedeneyev, A.Yu. Volkov, A.I. Demin, and Ye.M. Kudryavtsev (0). Influence of the nozzle geometry and stagnation conditions on the parameters of a c-w CO_2 gasdynamic laser operating at the 03'0 ⇄ 10°0 transition. BAPS, no. 11-12, 1980, 653-665. (RZhF, 7/82, 7D951)

92. Konyukhov, V.K. (193). Nearly isentropic flows in gasdynamic lasers. Sb 6, 148-161.

93. Soroka, A.M. (1). Theoretical study on plasma and gasdynamic processes in the active medium of electroionization molecular lasers. Fizicheskiy institut AN SSSR. Dissertation, 1981, 23 p. (KLDVAD, 7/82, 10432)

94. Volkov, V.A., A.P. Zuyev, N.N. Ostroukhov, and B.K. Tkachenko (118). *Flow structure and relaxation losses in the flow in a Laval nozzle* during a CO_2 blow-in. Deposit at VINITI, no. 1503-82, 1 Apr 1982, 59 p. (RZhF, 8/82, 8D1214)

3. Excimer

95. Batyrbekov, G.A., S.A. Kostritsa, Yu.Ye. Kuz'min, A.B. Tleuzhanov, and M.U. Khasenov (444). Feasibility of developing excimer lasers with ionization by radiation from a nuclear reactor. ZhTF P, no. 13, 1982, 789-791.

96. Konovalov, I.N. (132). Study on e-beam and discharge-pumped and e-beam-controlled XeP* and XeBr* molecular lasers. Tomskiy GU. Dissertation, 1981, 23 p. (KLDVAD, 8/82, 12114)

97. Tarasenko, V.F. (466). Noble gas halide exciplex lasers. Sb 5, 171-203.

4. Theory

98. Akishev, Yu.S., S.V. Pashkin, and P.I. Peretyat'ko (23). Effect of photoprocesses on the characteristics of a glow discharge in a gas flow at moderate pressure. TVT, no. 4, 1982, 770-771.

99. Averbukh, I.Sh., V.A. Kovarskiy, and N.F. Perel'man (0). Vibrational bistability and nonequilibrium phase transition in laser-excited molecular systems. Sb 7, 30-49.

100. Bakumenko, V.M., and V.I. Chebotarev (34). Designing a tunable gas laser. Khar'kovskiy GU. Vestnik, no. 227, 1982, 52-56. (RZhRadiot, 7/82, 7Ye15)

101. Basov, N.G., V.S. Zuyev, L.D. Mikheyev, and Yu.Yu. Stoylov (1). New efficient mechanism of blue-green lasing in high-pressure gases. IAN Fiz, no. 8, 1982, 1510-1520.

102. Basov, N.G., M.A. Gubin, V.V. Nikitin, A.V. Nikul'chin, V.N. Petrovskiy, Ye.D. Protsenko, and D.A. Tyurikov (1,16). High-sensitivity method of resolving narrow spectral lines based on detected resonant frequencies of a two-mode gas laser with nonlinear absorption. IAN Fiz, no. 8, 1982, 1573-1583.

103. Bondarenko, A.V., F.V. Lebedev, M.M. Smakotin, and V.B. Flerov (23). Experimental study on a longitudinal discharge in a turbulent gas flow. TVT, no. 4, 1982, 649-652.

104. Burtsev, V.A., and Yu.I. Sholokhov (247). Energy characteristics of the gas flow in industrial lasers. NII elektrofizicheskoy apparatury. Preprint, no. P-K-0534, 1981, 9 p. (RZhF, 8/82, 8D1215)

105. Gas lasers for industry and research. Soviet Export, no. 4, 1982, 8-9.

106. Gubin, M.A., V.M. Yermachenko, A.S. Kurlyandskiy, V.V. Nikitin, V.N. Petrovskiy, Ye.D. Protsenko, A.N. Rurukin, and A.S. Shelkovnikov (1). Interaction of two spaced modes in gas lasers. Fizicheskiy institut AN SSSR. Preprint, no. 261, 1982, 29 p.

107. Odintsov, A.I., and V.A. Spazhakin (2). Effect of diffusion on gain saturation in gaseous active media. KE, no. 8, 1982, 1708-1710.

108. Rubanov, V.S., L.P. Svirina, and V.N. Severikov (3). Nonlinear anisotropic properties of a gas medium. DAN B, no. 7, 1982, 616-619.

109. Shapiro, D.A. (75). Nonlinear spectroscopic phenomena in ion lasers. Institut avtomatiki i elektrometrii SOAN. Dissertation, 1981, 14 p. (KLDVAD, 8/82, 12187)

110. Vasil'yev, B.I., A.Z. Grasyuk, A.P. Dyad'kin, S.V. Yefimovskiy, A.K. Zhigalkin, Yu.I. Karev, L.L. Losev, V.G. Smirnov, A.N. Sukhanov, and A.B. Yastrebkov (1). Laser-pumped molecular lasers. Tr 1, 3-50.

D. CHEMICAL LASERS

1. $F_2+H_2(D_2)$

111. Bashkin, A.S., V.Yu. Nikitin, A.N. Orayevskiy, O.Ye. Porodinkov, V.N. Tomashov, M.P. Frolov, and N.N. Yuryshev (1). Chemical hydrogen fluoride lasers: what we know about their possibilities. IAN Fiz, no. 8, 1982, 1528-1533.

112. Bosamykin, V.S., Ye.B. Gordon, V.V. Gorokhov, V.I. Karelin, V.I. Matyushenko, P.B. Repin, and V.D. Sizov (67). Pulsed high-pressure HF chemical laser with electric discharge initiation. KE, no. 7, 1982, 1489-1491.

113. Krutova, V.G., A.A. Stepanov, and V.A. Shcheglov (1). Effect of translational and rotational relaxation on the specific energy characteristics of a c-w HF chemical laser. KE, no. 8, 1982, 1542-1549.

2. Photodissociative

114. Zalesskiy, V.O., A.M. Kokushkin, and S.S. Polikarpov (0). C-w photodissociation laser using condensation and evaporation to achieve a closed cycle. ZhTF P, no. 15, 1982, 907-911.

3. Transfer

4. CS_2+O_2

115. Kedrov, A.Yu. (118). Promoting the oxidation of carbon disulfide in a chemical CO combustion laser. Moskovskiy fiziko-tekhnicheskiy institut. Dissertation, 1981, 20 p. (KLDVAD, 7/82, 10362)

5. O_2+I_2

116. Zagidullin, M.V., V.I. Igoshin, V.A. Katulin, and N.L. Kupriyanov (1). Theoretical study on chemical generators of singlet oxygen for an oxygen-iodine laser. Fizicheskiy institut AN SSSR. Preprint, no. 211, 1982, 45 p.

6. Miscellaneous

117. Lukashenko, S.V., V.A. Martirosov, and L.N. Ozerov (0). Laboratory pulsed chemical lasers. Review. Sb 8, 79-88.

E. COMPONENTS

1. Resonators

a. Design and Performance

118. Boytsov, V.F., and S.G. Slyusarev (12). Threshold conditions at the limits of stability in optical ring resonators with spatially inhomogeneous media. Deposit at VINITI, no. 1910-82, 19 Apr 1982, 8 p. (RZhF, 8/82, 8D1292)

119. Boytsov, V.F., and S.G. Slyusarev (12). Optical ring resonator with plane mirrors and an amplifying medium separated by a diaphragm. Leningradskiy GU. Vestnik, no. 4, 1982, 98-102.

120. Gulin, A.V. (19). "Soft" diaphragm in a ring resonator. Tr 3, 59-63.

121. Ishchenko, Ye.F., and G.S. Ramazanova (19). Calculating the optimal coupling of an active optical resonator. Tr 3, 21-67.

122. Orlov, L.N. (3). Effect of temperature on lasing in ring lasers with polarization nonmutuality. Institut fiziki AN BSSR. Preprint, no. 261, 1982, 25 p. (RZhF, 8/82, 8D1289)

123. Vorontsov, V.I., V.I. Kravchenko, Yu.D. Opanasyuk, and Yu.N. Parkhomenko (51). Selection properties of a linear resonator with a nonsymmetric dispersion element. KE, no. 8, 1982, 1586-1591.

b. Mode Kinetics

124. Dotsenko, A.V. (98). Self-modulation and beat modes of opposed waves in a solid-state ring laser. NII yadernoy fiziki pri Moskovskom GU. Dissertation, 1981, 16 p. (KLDVAD, 7/82, 10345)

2. Pump Sources

125. Besshaposhnikov, A.A., V.I. Blokhin, V.B. Voronin, V.A. Myslin, S.V. Pashkin, A.D. Petrova, N.V. Simonova, and N.A. Sokolov (0). Study on the process of ozone formation in a high-pressure glow discharge in a nitrogen-air flow. KhVE, no. 4, 1982, 344-349.

126. Bychkov, Yu.I. (466). Energy characteristics of discharges in dense gases. Sb 5, 72-97.

127. Gadiyak, G.V., and V.A. Shveygert (0). Effect of a magnetic field on the homogeneity of a non-self-sustained discharge. Sb 9, 14-20. (RZhF, 8/82, 8G366)

128. Glova, A.F. (23). Study on an alternating-current discharge and its use for pumping a CO_2 active medium. Institut atomnoy energii. Dissertation, 1981, 21 p. (KLDVAD, 7/82, 10335)

129. Gogolitsyn, L.Z., A.Ye. Ovcharenko, Yu.A. Petrov, and V.A. Gal'yanov (110). Device for charging a capacitor tank. Otkr izobr, no. 36, 1981, 868986. (RZhRadiot, 7/82, 7Ye314)

130. Gornyy, M.B., and B.G. Matisov (29). Dependence of the total concentration of optically oriented atoms on the radius of the pump beam. ZhTF P, no. 14, 1982, 859-862.

131. Gul'binas, I.A., R.Yu. Krauyalis, and E.K. Maldutis (0). Control device for a solid state laser power supply. PTE, no. 4, 1982, 258-259.

132. Gusev, P.S., V.I. Zhil'tsov, S.M. Pechenegov, A.B. Sinitsyn, and B.F. Trinchuk (0). Optical pump source for a solid state laser. Otkr izobr, no. 28, 1982, 810007.

133. Konvisar, P.G., V.D. Lokhnygin, S.R. Rustamov, and A.A. Fomichev (118). Dye laser pumped by a c-w Nd:YAG laser with intracavity second harmonic generation. KE, no. 8, 1982, 1736-1737.

134. Korolev, Yu.D. (466). Transition of an internal discharge in a spark. Sb 5, 98-140.

135. Mesyats, G.A. (466). General description of an e-beam-injected discharge. Sb 5, 7-16.

136. Mesyats, G.A. (466). High-power injection commutators. Sb 5, 203-219.

137. Mintsev, V.B., and V.Ye. Fortov (67). Explosion shock tubes. TVT, no. 4, 1982, 745-764.

138. Nikolayev, A.G. (0). Device for charging a storage capacitor. Otkr izobr, no. 39, 1981, 875599. (RZhRadiot, 7/82, 7Ye313)

139. Petru, F., and Z. Vesela (NS). Cathode part of a gas-laser discharge tube. Author's certificate Czechoslovakia, no. 188612, 15 July 1981. (RZhRadiot, 8/82, 8Ye438)

140. Ryzhov, V.V. (466). Ionization and excitation of a gas by an e-beam. Sb 5, 17-72.

141. Vdovin, S.S., L.Z. Tsypko, and Yu.Yu. Shamray (150). High-voltage pulsed transformer. Otkr izobr, no. 47, 1981, 892485. (RZhRadiot, 8/82, 8Ye426)

3. Diffraction Gratings

142. Kiselev, N.G. (0). Using a holographic diffraction grating as a laser beam deflector. OiS, v. 53, no. 1, 1982, 135-140.

143. Parkhomenko, Yu.N. (51). Optical dispersion resonators with diffraction gratings. Kiyevskiy GU. Dissertation, 1981, 15 p. (KLDVAD, 8/82, 12138)

144. Tlusty, T. (NS). Diffraction grating for generating beams oriented perpendicularly to each other. Author's certificate Czechoslovakia, no. 192954, 1 Sep 1981. (RZhRadiot, 8/82, 8Ye428)

4. Filters

145. Eigl, J., F. Zdenek, and M. Jahoda (NS). Optical filter with variable selectivity. Author's certificate Czechoslovakia, no. 188355, 15 June 1981. (RZhRadiot, 8/82, 8Ye262)

146. Ochin, Ye.F. (30). Selecting coding quality criteria for spatial-frequency filters in coherent optical processors. IVUZ Priboro, no. 8, 1982, 54-58.

5. Beam Splitters

147. Osipov, Yu.V., and V.N. Popov (110). Birefringent prism with a variable angle of splitting. Otkr izobr, no. 41, 1981, 879537. (RZhRadiot, 7/82, 7Ye316)

6. Mirrors

148. Apollonov, V.V., V.G. Yermolayev, L.T. Kir'yanova, G.A. Kulikova, L.M. Ostrovskaya, V.Yu. Khomich, and M.I. Tsypin (1). Structure of copper-tin alloy film surfaces grown by condensation in vacuum. KE, no. 8, 1982, 1673-1677.

149. Balashov, I.F., B.G. Berezin, B.P. Kryzhanovskiy, M.I. Polyakov, S.I. Khankov, and G.A. Nikitina (7). Solid state laser with a mirror transparent to both IR and UV radiation. OMP, no. 8, 1982, 28-29.

150. Bal'kyavichyus, P.I., A.S. Dement'yev, I.P. Lukoshyus, E.K. Maldutis, and V.P. Tarulis (506). Effect of optical breakdown of a glass Brillouin scattering mirror on wavefront reversal. ZhTF P, no. 13, 1982, 816-819.

151. Bardin, V.P., A.N. Vishnev, M.S. Belov, I.D. Morozov, and L.G. Rytikov (0). Light-weight mirror. Otkr izobr, no. 35, 1982, 866525. (RZhRadiot, 7/82, 7Ye322)

152. Kharitonov, V.V., and A.A. Plakseyev (16). Threshold heating of laser mirrors with cooled porous substrates. TVT, no. 4, 1982, 712-717.

153. Nikitenko, A.G., and Yu.V. Troitskiy (75). Formation of a non-Gaussian intensity profile in a laser with inhomogeneous mirrors. KE, no. 8, 1982, 1600-1607.

154. Popova, L.L. (94). Optimization of the characteristics of a ring laser with a degraded mirror. Gor'kovskiy GU. Dissertation, 1981, 24 p. (KLDVAD, 7/82, 10417)

155. Sagitov, S.I. (1). Mirrors for the ultraviolet and infrared regions of the spectrum. Tr 1, 118-164.

7. Detectors

156. Andryukhina, E.D., K.S. Kyabilin, and O.I. Fedyanin (1). Absolute sensitivity of pyroelectric detectors. Fizicheskiy institut AN SSSR. Preprint, no. 217, 1982, 12 p.

157. Antsiperov, V.Ye., and G.I. Maystrenko (118). Analysis of an algorithm for measuring distance by the center of gravity of a pulsed signal. Sb 10, 40-51. (RZhRadiot, 8/82, 8Ye415)

158. Bakalov, V.P. (0). Digital modeling of optical signal detectors. IVUZ Radioelektr, no. 7, 1982, 68-70.

159. Borisov, E.V. (0). Synchronization device. Otkr izobr, no. 44, 1981, 886288. (RZhRadiot, 8/82, 8Ye419)

160. Borshch, V.V., M.P. Lisitsa, P.Ye. Mozol', and I.V. Fekeshgazi (6). Photoresists for recording pulsed laser radiation. Sb 2, 55-57.

161. Gorlin, G.B., V.V. Yegorov, V.M. Murugov, L.G. Paritskiy, and T.V. Tisnek (4). Photographic recording of CO_2 laser radiation by silver halide photoemulsions. Deposit at VINITI, no. 2040-82, 26 Apr 1982, 18 p. (DR, 8/82, 424)

162. Raskin, A.A., and Yu.I. Sokolov (0). Study on semiconductor compound photodetector structures. Sb 12, 90-97. (RZhF, 7/82, 7D777)

163. Safonov, N.N., G.N. Talyzov, S.N. Lebedev, and S.V. Stolbin (0). Electronic device for processing information from a pyrodetector. Sb 13, 1981, 137-140. (RZhRadiot, 7/82, 7Ye309)

164. Samoylov, V.P. (19). Collection of charge carriers in the forward layer of a photoelement in the presence of an electric field. Tr 3, 36-40.

165. Yermakov, B.V., and M.B. Kozintsova (19). Radiation conversion efficiency of an end photoconverter with a p-i-n junction. Tr 3, 46-50.

166. Zakharov, V.N., and V.F. Sharikhin (19). Substitution of a thermo-photoelectric comparator. Tr 3, 41-45.

167. Zarkevich, Ye.A., and O.N. Makeyev (0). Photodetectors and photo-receivers for fiber-optic communication lines. Radiotekhnika, no. 3, 1982, 65-70. (RZhRadiot, 7/82, 7Ye310)

8. Modulators

168. Berezin, I.L., Yu.M. Golubovskiy, V.L. Ivashintsova, and L.N. Pivovarova (7). Using ferrite garnet films as magnetooptic modulators. OMP, no. 7, 1982, 45-47.

169. Bondarenko, V.V., A.G. Selitskiy, and Yu.P. Troitskiy (110). Pulsed magnetooptic laser modulator. Tr 4, 55-59. (RZhRadiot, 7/82, 7Ye106)

170. Chirkin, A.S., and F.M. Yusubov (2). Focusing of optical beams with random phase modulation. KE, no. 8, 1982, 1716-1718.

171. Dzyubenko, M.I., and V.V. Shevchenko (84). Study on a Pockels cell probe sensor of electric field intensity. Institut radiofiziki i elektroniki AN UkrSSR. Preprint, no. 181, 33 p.

172. Goncharov, V.N. (0). Evaluating the parameters of a broadband microwave rectangular waveguide optical modulator. IVUZ Radioelektr, no. 8, 1982, 78-80.

173. Jankiewicz, Z. (NS). Generation of a laser pulse train by gradually increasing resonator losses. KE, no. 7, 1982, 1331-1340.

174. Kiselev, V.P., and V.P. Reshetin (0). Study on the operation of optical dispersion elements. KE, no. 8, 1982, 1646-1652.

175. Kotova, S.P. (16). Coding and conversion of optical signals by spatial phase modulation of light in liquid crystals. Moskovskiy inzhenerno-fizicheskiy institut. Dissertation, 1981, 13 p. (KLDVAD, 7/82, 10370)

176. Mak, A.A., V.P. Pokrovskiy, L.N. Soms, and A.A. Tarasov (0). Induced dichroism in passive laser Q-switches. KE, no. 8, 1982, 1607-1613.

177. Mikhnov, S.A., and V.A. Kononov (0). Dependence of the lasing energy of a garnet laser on the temperature of a color-center LiF crystal switch. Deposit at VINITI, no. 2778-82, 3 June 1982, 6 p. (RZhF, 8/82, 8D949)

178. Tarasov, A.A. (0). Feasibility of increasing the brightness of lasers with passive Q-switches based on LiF crystals with F_2 color centers. KE, no. 8, 1982, 1727-1729.

179. Vasil'yev, A.A., P.V. Vashurin, A.I. Zhindulis, I.N. Kompanets, A.V. Parfenov, and R.M. Savvina (0). Photosensitive photoconductor—liquid crystal structures. Sb 14, 20-40. (RZhF, 7/82, 7D545)

180. Vasil'yeva, M.A., L.Ye. Vorob'yev, S.N. Danilov, V.I. Stafeyev, and D.A. Firsov (0). Thin-film waveguide with diffraction coupling-in of CO_2 laser radiation by Ge-As_2S_3. ZhTF P, no. 16, 1982, 1014-1017.

181. Yekimov, V.G., and B.V. Strukov (0). Device for shaping coherent frequency-modulated signals. Otkr izobr, no. 35, 1981, 866696. (RZhRadiot, 7/82, 7Ye105)

F. NONLINEAR OPTICS

1. Frequency Conversion

182. Allakhverdiyev, K.R., R.I. Guliyev, E.Yu. Salayev, and V.V. Smirnov (1). Study on linear and nonlinear optical properties of GaS_xSe_{1-x} crystals. KE, no. 7, 1982, 1483-1485.

183. Apanasevich, P.A., R.G. Zaporozhchenko, V.A. Zaporozhchenko, I.S. Zakharova, and A.V. Kachinskiy (3). Effect of phase disorder in a nonlinear crystal and in air on intracavity frequency conversion of ultrashort pulses. KE, no. 7, 1982, 1355-1361.

184. Atamanyuk, V.P., N.Ye. Korniyenko, A.I. Ryzhkov, and V.L. Strizhevskiy (51). Propagation of interacting waves of the fundamental frequency and its second optical harmonic in an actively nonlinear medium. KE, no. 8, 1982, 1678-1685.

185. Kondilenko, I.I., P.A. Korotkov, and G.N. Dmitrik (51). Electrooptic tuning of phase synchronism. Sb 2, 81-83.

186. Mikhaylov, V.A., and V.I. Odintsov (2). Study on the excitation threshold and intensity of stimulated Raman scattering in rubidium vapors under various broadband pumping. VMU, no. 4, 1982, 96-98.

187. Popov, A.K. (210). Frequency conversion of laser radiation in gaseous nonlinear media. IAN Fiz, no. 8, 1982, 1611-1616.

188. Szabo, L. (NS). Second harmonic generation in KDP crystals. APH, no. 3, 1981, 291-294. (RZhF, 8/82, 8D1325)

189. Viktorova, A.A., A.P. Savikin, and V.B. Tsaregradskiy (94). Study on conditions for converting laser radiation in binary dye mixtures. KE, no. 7, 1982, 1340-1346.

2. Parametric Processes

190. Grigornis, R., A. Yankauskas, A. Piskarskas, A. Stabinis, and A. Varanavichyus (0). Temporal and spatial phase conjugation of weak picosecond light pulses in parametric amplifiers with energy efficiency of 10^7- 10^8. Sb 15, 150-166. (RZhF, 7/82, 7D1035)

191. Lugovoy, V.N. (1). Cerenkov-type optical parametric generation in a "double" Fabry-Perot interferometer. KE, no. 8, 1982, 1653-1658.

192. Magnitskiy, S.A., V.I. Pryalkin, V.G. Tunkin, and A.I. Kholodnykh (2). Effect of optical inhomogeneities on parametric amplification of picosecond optical pulses in lithium niobate crystals. KE, no. 7, 1982, 1414-1420.

193. Paul, H., and W. Brunner (NS). Proposed experiment to observe photon antibunching using a c-w picosecond laser. Sb 15, 128-135. (RZhF, 7/82, 7D1033)

194. Rudenko, V.K. (2). Theory on the parametric generation of optical waves in crystals and of sound waves in liquid helium II in resonator systems. Moskovskiy GU. Dissertation, 1981, 12 p. (KLDVAD, 7/82, 10425)

195. Shmelev, G.M., and Nguyen Kuang Bau (0). Parametric conversion of plasmons and phonons in a semiconductor. Sb 7, 109-113. (RZhF, 8/82, 8Ye1146)

196. Volosov, V.D., and A.G. Kalintsev (0). Feasibility of producing high-efficiency parametric amplifiers for nanosecond laser pulses. IAN Fiz, no. 8, 1982, 1556-1560.

3. Stimulated Scattering

a. Raman

197. Abbasov, A.N., K.R. Allakhverdiyev, and S.S. Babayev (60). Raman scattering in $CdInGaS_4$ crystals under pressure. FTT, no. 8, 1982, 2479-2481.

198. Bobrovskiy, A.N., V.A. Mishchenko, G.D. Myl'nikov, and A.F. Semerok (0). Stimulated Raman scattering in CO_2 in a multipass cuvette. KE, no. 8, 1982, 1706-1707.

199. Bortkevich, A.V., S.N. Karpukhin, and A.I. Stepanov (0). Study on crystalline media for Raman converters. ZhPS, v. 37, no. 2, 1982, 332-334.

200. Dobrzhanskiy, G.F., Yu.N. Polivanov, and K.A. Prokhorov (1). Effect of aperture on the spectral composition of intracavity stimulated Raman scattering by optical phonons and polaritons. KE, no. 8, 1982, 1686-1688.

201. Hunsalz, G., A. Lau, and M. Pfeiffer (NS). Effect of lasing conditions on the generation of inverse Raman scattering during longitudinal and transverse excitation, allowing for the damage threshold. ETP, no. 4, 1982, 29-37. (RZhF, 8/82, 8D1341)

202. Nikitin, S.Yu. (2). Lasing spectrum during coherent Raman mixing. VMU, no. 4, 1982, 69-70.

203. Treneva, Ye.G. (2). Study on amplification of stimulated Raman scattering in gases under incoherent pumping. Deposit at VINITI, no. 1368-82, 26 March 1982, 10 p. (RZhF, 7/82, 7D1047)

204. Zenenko, A.A., and Yu.S. Oseledchik (0). Efficiency of stimulated Raman scattering in a Markov noise field of pumping. Deposit at VINITI, no. 2186-82, 4 May 1982, 15 p. (DR, 8/82, 427)

205. Zorina, Ye.V., V.I. Odintsov, and Ye.G. Treneva (2). Study on stimulated Raman scattering pulses from excitation in a spatially inhomogeneous pumping field. Deposit at VINITI, no. 1369-82, 26 March 1982, 22 p. (RZhF, 7/82, 7D1042)

b. Brillouin

206. Andreyev, N.F. (0). Mixing of components of stimulated Brillouin scattering in various liquid mixtures. OiS, v. 53, no. 1, 1982, 7-9.

207. Basiyev, T.T., Ye.M. Dianov, A.Ya. Karasik, A.V. Luchnikov, S.B. Mirov, and A.M. Prokhorov (1). Stimulated Brillouin scattering in a multimode glass fiber lightguide. ZhETF P, no. 3, 1982, 85-87.

208. Bogdanov, V.N., V.A. Solov'yev, and Ye.O. Chernysheva (12). Optical scattering in Na_2O-Ba_2O_3 glass systems. FiKhS, no. 4, 1982, 491-494.

209. Bunkin, F.V., D.V. Vlasov, D.M. Polyakh, Kh.Sh. Saidov, and Ye.P. Shchebnev (1). Laser diagnostics of the temperature of transparent media based on stimulated Brillouin scattering. Fizicheskiy institut AN SSSR. Preprint, no. 54, 1982, 12 p.

210. Krivoshchekov, G.V., M.F. Stupak, and I.G. Kobyakov (75). Broadening the Brillouin scattering spectrum during wavefront reversal. KE, no. 7, 1982, 1389-1393.

211. Papernyy, S.B., V.F. Petrov, and V.R. Startsev (0). Spatial characteristics of quasi-soliton pulses formed during stimulated Brillouin scattering in gases. IAN Fiz, no. 8, 1982, 1594-1599.

212. Yashin, V.Ye., V.I. Kryzhanovskiy, and V.A. Serebryakov (0). Wavefront reversal of nano- and subnanosecond optical pulses during stimulated Brillouin scattering. KE, no. 8, 1982, 1695-1697.

c. Miscellaneous Scattering

213. Basov, N.G., V.S. Zuyev, K.S. Korol'kov, O.Yu. Nosach, and Ye.P. Orlov (1). New type of stimulated optical scattering pumped by partial vibrations of a medium due to enthalpy of laser-controlled processes. IAN Fiz, no. 8, 1982, 1534-1542.

4. Self-focusing

214. Gorbunov, L.M. (1). Spectrum of reflected radiation from self-focusing of light in a laser plasma. Fizicheskiy institut AN SSSR. Preprint, no. 212, 1982, 16 p.

5. Acoustic Interaction

215. Antonov, S.N., Ye.V. Kuznetsova, V.I. Mirgorodskiy, and V.V. Proklov (15). Acoustooptic study on the propagation of slow acoustic waves in TeO_2. Akusticheskiy zhurnal, no. 4, 1982, 433-437.

216. Bozhkov, A.I., F.V. Bunkin, Al.A. Kolomenskiy, M.L. Lyamshev, A.I. Malyarovskiy, V.G. Mikhalevich, and A.M. Rodin (1). Transient sound from thermooptic sources induced by scanning laser beams. Akusticheskiy zhurnal, no. 4, 1982, 461-469.

217. Bozhkov, A.I., F.V. Bunkin, A.M. Galstyan, Al.A. Kolomenskiy, and V.G. Mikhalevich. Laser excitation of sound in liquids. IAN Fiz, no. 8, 1982, 1624-1631.

218. Malyarovskiy, A.I. (1). Experimental study on moving laser sources of sound in a liquid. Fizicheskiy institut AN SSSR. Dissertation, 1981, 19 p. (KLDVAD, 7/82, 10387)

219. Pogorel'skiy, Yu.V. (4). Feasibility of exciting surface sound in semiconductors using modulated optical absorption. FTT, no. 8, 1982, 2361-2364.

220. Vyazovskiy, M.V. (348). Second harmonic generation in semiconductors induced by an acoustic wave. FTP, no. 7, 1982, 1332-1333.

6. General Theory

221. Arakelyan, S.M., A.S. Karayan, and Yu.S. Chilingaryan (37). Orientation optical effects in mesophase: threshold reorientation during nonadiabatic deformations. Accumulation of nonlinearity. IAN Fiz, no. 8, 1982, 1617-1623.

222. Baltrameyunas, R., Yu.Vaytkus, Yu. Vishchakas, V. Gavryushin, V. Kubertavichyus, and G. Rachyukaytis (49). Spectral and polarization studies on two-photon absorption in A^2B^6 group semiconductors. IAN Fiz, no. 8, 1982, 1442-1451.

223. Basov, N.G., and I.G. Zubarev (1). Wavefront reversal of laser radiation. CCF, v. A32, no. 1, 1982, 26-38. (RZhRadiot, 7/82, 7Ye410)

224. Belkner, P., and F.J. Schuette (NS). Antibunching of photons in devices with interference and nonlinear interactions. Sb 16, 811-817. (RZhF, 7/82, 7D906)

225. Bol'shov, L.A., D.V. Vlasov, and M.I. Persiantsev (1). Stability of modes of compensation for distortion in randomly polarized beams. KE, no. 7, 1982, 1398-1405.

226. Bykova, O.G., N.G. Bykova, V.V. Lebedeva, A.V. Petukhov, and N.G. Preobrazhenskiy (193). Properties of nonlinear resonances in bound Doppler broadened transitions. Part 1. Forming of a nonlinear resonance structure in a Doppler contour. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Preprint, no. 40, 1981, 38 p. (RZhF, 8/82, 8D1154)

227. Chirkin, A.S., and D.B. Yusupov (2). Quasisynchronous parametric interaction of optical waves with equal group velocities. KE, no. 8, 1982, 1625-1629.

228. Dabagyan, A.A. (59). Dynamics of the development of multiphoton resonance processes. Institut fizicheskikh issledovaniy AN ArmSSR. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 10342)

229. Dianov, Ye.M., E.A. Zakhidov, A.Ya. Karasik, P.V. Mamyshev, and A.M. Prokhorov (1). Stimulated four-photon nonlinear processes in glass fiber lightguides with few modes. ZhETF, v. 83, no. 1, 1982, 39-49.

230. Drabovich, K.N., M. Ignatavichyus, R. Kupris, A. Matsulyavichyus, S.M. Pershin, N.M. Sinyavskiy, V. Smil'gyavichyus, and A.L. Surovegin (2,49). Six- and eight-photon processes in sodium vapor under conditions of multiphoton resonance. IAN Fiz, no. 8, 1982, 1638-1643.

231. Dubovik, A.N. (2). Higher optical nonlinearities and multiphoton processes in isotropic media. Moskovskiy GU. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 10346)

232. D'yakov, Yu.Ye., N.A. Iskanderov, and S.Yu. Nikitin (2). Resonant and parametric interaction of a random optical field with a nonlinear medium. IAN Fiz, no. 8, 1982, 1463-1477.

233. Fedorov, A.B., M.G. Galushkin, and A.M. Seregin (118). Energy characteristics of optical systems with wavefront reversal. Sb 10, 25-32. (RZhRadiot, 8/82, 8Ye69)

234. Gladkov, S.M., M.G. Karimov, and N.I. Koroteyev (2). Intense nonlinear optical pumping of fully symmetrical vibrations of polyatomic molecules: study on Fermi resonance and other anharmonic interactions. ZhETF:, v. 35, no. 9, 1982, 381-383.

235. Henneberger, F., and V. May (NS). Nonlinear optical response and optical bistability due to excitonic molecules. PSS, v. B109, no. 2, 1982, K139-K143. (RZhF, 8/82, 8D1315)

236. Ivakhnik, V.V. (598). Filtering of optical radiation during nondegenerate four-photon interaction. IVUZ Fiz, no. 8, 1982, 97-99.

237. Kochelap, V.A., L.Yu. Mel'nikov, and V.N. Sokolov (6). Multivalued distribution of nonequilibrium electrons and holes in semiconductors with concentration nonlinearity of optical absorption. FTP, no. 7, 1982, 1167-1171.

238. Lembrikov, B.I. (0). Nonlinear optical effects in liquid crystals. ZhTF, no. 8, 1982, 1506-1509.

239. Martynov, V.G., and A.T. Anistratov (210). Optical and electrooptical properties of NH_4HSeO_4 near ferroelectric phase transition. FTT, no. 7, 1982, 2013-2015.

240. Morozov, N.A., and A.I. Rukovishnikov (15). Study on repolarization of barium-strontium niobate ferroelectric crystals. FTT, no. 7, 1982, 2087-2092.

241. Naboykin, Yu.V., and V.V. Samartsev (36). Effects of nonlinear coherent interaction in doped molecular crystals. IAN Fiz, no. 8, 1982, 1491-1495.

242. Odulov, S.G., Yu.A. Reznikov, M.S. Soskin, and A.I. Khizhnyak (5). Photostimulated transformation of molecules: a new type of giant optical nonlinearity in liquid crystals. ZhETF, v. 82, no. 5, 1982, 1475-1484.

243. Perlin, Ye.Yu., and V.N. Chebotar' (0). Multiphoton interband absorption of circularly polarized light in cubic crystals. Sb 7, 83-99. (RZhF, 8/82, 8D1324)

244. Popov, A.K., V.M. Shalayev, and V.Z. Yakhnin (210). Light-induced drift of gases under two-photon excitation. Institut fiziki SOAN. Preprint, no. 183F, 1981, 30 p. (RZhF, 7/82, 7D916)

245. Vasil'yev, L.A., M.G. Galushkin, A.M. Seregin, and N.V. Cheburkin (0). Wavefront reversal during four-wave interaction in a medium with thermal nonlinearity. KE, no. 8, 1982, 1571-1575.

G. SPECTROSCOPY OF LASER MATERIALS

246. Bunkin, S.B., V.F. Kamalov, N.I. Koroteyev, S.A. Losev, and A.S. Piskarskas (2,49,248). Diagnostics of laser media using active spectroscopy. IAN Fiz, no. 8, 1982, 1584-1589.

247. Kudryavtsev, N.N., and S.S. Novikov (0). Integrated radiation characteristics and the absorption band in CO and CO_2 under vibrational nonequilibrium conditions. ZhPS, v. 37, no. 1, 1982, 125-132.

248. Loshchenov, V.B. (18). Study on the interrelationship of the structure and spectral luminescent properties of laser crystals and glasses based on neodymium phosphates. Institut obshchey i neorganicheskoy khimii AN SSSR. Dissertation, 1981, 25 p. (KLDVAD, 7/82, 10381)

H. ULTRASHORT PULSE GENERATION

249. Bol'shov, L.A., N.N. Yelkin, T.K. Kirichenko, V.V. Likhanskiy, and A.P. Napartovich (0). Study on amplification of ultrashort optical pulses in resonant three-level systems. KE, no. 7, 1982, 1476-1479.

250. Manakov, S.V. (73). Propagation of an ultrashort optical pulse in a two-level laser amplifier. ZhETF, v. 83, no. 1, 1982, 68-83.

251. Yasevichyute, Ya.A. (3). Optimization of parametric amplification of picosecond light pulses. Institut fiziki AN BSSR. Dissertation, 1981, 12 p. (KLDVAD, 8/82, 12191)

J. CRYSTAL GROWING

252. Oganesyan, L.A. (59). Study on the vaporization of the melt and determination of the optimal conditions for growing YAG single crystals in a vacuum. Institut fizicheskikh issledovaniy AN ArmSSR. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 10406)

K. THEORETICAL ASPECTS OF ADVANCED LASERS

253. Gaponov, S.V., and N.N. Salashchenko (426). Multilayered mirror for vacuum ultraviolet and soft x-ray radiation. IAN Fiz, no. 8, 1982, 1543-1547.

254. Horvath, Z., Gy. Farkas, and N. Kroo (NS). Method and device for increasing the intensity of a laser plasma x-ray source and for realizing an x-ray laser. Patent Hungary, no. 175116, 28 Feb 1981. (RZhRadiot, 7/82, 7Ye104)

255. Kokhman'ski, S.S., and V.V. Kulish (435). Parametric resonance from the motion of relativistic electrons in an electromagnetic wave field. Deposit at VINITI, no. 2314-82, 10 May 1982, 33 p. (RZhF, 8/82, 8G133)

256. Serov, A.V. (1). Motion of an e-beam in a free-electron laser in an inhomogeneous e-m wave field. Fizicheskiy institut AN SSSR. Preprint, no. 63, 1982, 12 p. (RZhF, 8/82, 8D1159)

257. Yevdokimenko, Yu,I., K.A. Lukin, I.D. Revin, B.K. Skrynnik, and V.P. Shestopalov (84). New pump mechanism for a diffraction radiation oscillator—free electron laser. DAN SSSR, v. 265, no. 2, 1982, 318-321.

L. GENERAL LASER THEORY

258. Aleksanyan, A.G., E.M. Belenov, I.N. Kompanets, Yu.M. Popov, I.A. Poluektov, A.G. Sobolev, A.V. Uskov, and V.G. Tsukanov (1). Generation of electromagnetic oscillations by metal-barrier-metal-barrier-metal structures. KE, no. 8, 1982, 1700-1702.

259. Apanasevich, P.A., and V.A. Zaporozhchenko (3). Pulsed solid state lasers with active mode lock. IAN Fiz, no. 8, 1982, 1504-1509.

260. Balabanyan, G.O. (199). Asymptotically exact equations for mean values in laser theory. DAN SSSR, v. 265, no. 2, 1982, 314-317.

260. Basov, N.G. (0). Quantum electronics and philosophy. Nauka i zhizn', no. 7, 1982, 10-13.

262. Brodov, M.Ye., V.P. Degtyareva, P.P. Pashinin, V.N. Platonov, and R.V. Serov (1). Optimization of the energy characteristics of high-power laser systems, for example, the UMI-35. Fizicheskiy institut AN SSSR. Preprint, no. 51, 1982, 31 p. (RZhF, 8/82, 8D1180)

263. Gordiyets, B.F., and V.Ya. Panchenko (1). IR radiation and population inversion of CO_2 laser levels in the atmospheres of Venus and Mars. Fizicheskiy institut AN SSSR. Preprint, no. 207, 1982, 37 p.

264. Kotomtseva, L.A., N.A. Loyko, and A.M. Samson (3). Effect of the spatial structure of the coefficient of gain on laser dynamics. KE, no. 7, 1982, 1384-1389.

265. Likhanskiy, V.V., and A.P. Napartovich (23). Nonadiabatic transitions in a three-level system in a laser radiation field with continuously changing frequency. KE, no. 8, 1982, 1591-1599.

266. Minogin, V.G. (0). Resonant optical pressure in a partially coherent laser radiation field. OiS, v. 53, no. 1, 1982, 125-129.

267. Natarovskiy, S.N. (30). Lens raster operation in diverging and converging optical beams. IVUZ Priboro, no. 7, 1982, 94-96.

268. Spazhakin, V.A. (2). Amplification of light beams in active media with excited particle diffusion. Deposit at VINITI, no. 2540-82, 18 May 1982, 19 p. (RZhF, 8/82, 8D1178)

269. Tikhonov, A.N., V.Ya. Arsenin, V.I. Pavlov, and A.Kh. Pergament (71). Study on the divergence of radiation in high-power laser amplifiers based on active elements of rectangular cross-section. Institut prikladnoy matematiki AN SSSR. Preprint, no. 41, 1981, 24 p. (KL, 29/82, 26288)

270. Volodin, B.A. (2). Stimulated emission from a set of nonlinear oscillators. Moskovskiy GU. Dissertation, 1981, 18 p. (KLDVAD, 7/82, 10328)

271. Yefremov, V.A. (34). Theory of optically pumped pulsed molecular lasers. Khar'kovskiy GU. Vestnik, no. 277, 1982, 57-58. (RZhRadiot, 7/82, 7Ye17)

272. Yenin, V.I. (0). Noise characteristics of a regenerative laser amplifier of spatially modulated signals. IVUZ Radioelektr, no. 8, 1982, 81-83.

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

273. Askar'yan, G.A. (1). Increasing the transmission of laser and other radiation through soft opaque physical and biological media. KE, no. 7, 1982, 1379-1383.

274. Fedotkin, G.F., and G.A. Skorubskiy (290). C-w laser medical device. Meditsinskaya tekhnika, no. 4, 1982, 39-43.

275. Ignatenko, M. (0). Glaucoma: invasion by laser [developed by M. Krasnov, G. Yerashevskiy, A. Nesterov, and N. Mamedov (0)]. Soviet Union, no. 7, 1982, 30-31.

276. Kashuba, V.A., and M.A. Matyashova (354). Applications of laser radiation in hygienic studies. Gigiyena i sanitariya, no. 7, 1982, 55-58.

277. Korkushko, A.O., and Ye.L. Macheret (637). Mechanism of laser effects on somatic neuron membranes. Vrachebnoye delo, no. 7, 1982, 94-97.

278. Nikolayev, M.P., V.F. Anichin, O.P. Tokarev, and Yu.L. Tverskoy (517,641,640). Electron microscopic study on changes in the ear labyrinth receptors under laser effects. Vestnik oftal'mologii, no. 4, 1982, 39-43.

279. Nikolayev, M.P., V.F. Anichin, O.P. Tokarev, and Yu.L. Tverskoy (640,641,517). Electron microscopic study on the changes in ear labyrinth receptors from laser irradiation. Vestnik otorinolaringologii, no. 4, 1982, 39-44.

280. Safronov, A.M. (671). Experimental use of a CO_2 laser in surgery of the pancreas. Vsesoyuznyy nauchnyy tsentr khirurgii AMN SSSR. Dissertation, 1980, 26 p. (KLDVAD, 8/82, 13215)

281. Shirokov, V.A. (692). Functional-morphological bases for using a pulsed neodymium laser in neurosurgery. Experimental studies. Leningradskiy NI neyrokhirurgicheskiy institut. Dissertation, 1981, 16 p. (KLDVAD, 8/82, 13265)

282. Shutova, T.V. (597). Use of laser radiation in a health resort treatment complex for sufferers of arthritis. Odesskiy NII kurortologii. Dissertation, 1981, 21 p. (KLDVAD, 7/82, 11469)

283. Sidorov, Ye.G., N.M. Drozdova, G.G. Litvinova, N.M. Filimonova, V.I. Shurkin, and M.S. Ruzmetov (417). Angle-closure glaucoma in young people: laser and surgical management. Vestnik oftal'mologii, no. 4, 1982, 13-16.

284. Ushkova, I.N., L.A. Pokrovskaya, and I.M. Suvorov (429). Hemodynamics under the effect of laser irradiation. Gigiyena truda i professional'nyye zabolevaniya, no. 7, 1982, 44-45.

285. Volkov, V.V. (0). Use of lasers in ophthalmology. IAN Fiz, no. 8, 1982, 1548-1555.

286. Volodin, V.G., V.A. Mostovnikov, B.I. Avramenko, Z.I. Lisovskaya, and I.V. Khokhlov (473). Comparative mutagenic efficiency of gamma and laser radiation. DAN B, no. 8, 1982, 753-756.

287. Ziangirova, G.G., V.S. Akopyan, Z.U. Akhmed'yanova, O.K. Pereverzina, and T.S. Il'ina (417). Significance of changes in chorioretinal structures on the therapeutic effect of an argon laser. Experimental study. Vestnik oftal'mologii, no. 4, 1982, 51-57.

B. COMMUNICATIONS SYSTEMS

288. Adel' Mokhamed Mokhamed Daud, and L.M. Kuchikyan (435). Lightguides for transmitting coherent radiation. Deposit at VINITI, no. 1767-82, 12 April 1982, 12 p. (RZhF, 8/82, 8D360)

289. Aksenov, Ye.T., A.V. Kukharev, A.A. Lipovskiy, A.V. Pavlenko, and V.Yu. Petrun'kin (29). Study on the feasibility of integrating a semiconductor laser with a planar optical waveguide. ZhTF P, no. 13, 1982, 828-831.

290. Aleksandrov, I.V., S.Ya. Fel'd, and O.Ye. Shushpanov (0). High aperture lightguides with a hard external coating. Radiotekhnika, no. 3, 1982, 75-80. (RZhRadiot, 7/82, 7Ye152)

291. Alferov, Zh.I., M.I. Belovolov, A.N. Gur'yanov, A.T. Gorelenok, Ye.M. Dianov, A.A. Kuznetsov, A.V. Kuznetsov, A.M. Prokhorov, and I.S. Tarasov (1,4). Multichannel duplex fiber optic communication line for 1.3 μm wavelengths. KE, no. 8, 1982, 1698-1700.

292. Andrushko, L.M. (571). Fundamentals of the theory on synthesizing flat and circular dielectric waveguides in the optical range. Sb 2, 95-102.

293. Bogatyrev, V.A., M.M. Bubnov, N.N. Vechkanov, A.N. Gur'yanov, Ye.M. Dianov, A.S. Konov, S.V. Lavrishchev, and A.Yu. Laptev (1,297). High-strength fiber lightguides made by chemical vapor deposition. KE, no. 7, 1982, 1506-1509.

294. Borisov, V.I., and V.I. Lebedev (321). Optical gain in inhomogeneous waveguides with active boundary media. KE, no. 7, 1982, 1393-1398.

295. Butusov, M.M., N.V. Yermakova, and N.L. Urvantseva (0). Interference effects in bimodal optical fibers. IVUZ Radioelektr, no. 8, 1982, 74-75.

296. Chernov, S.M., K.K. Zhilik, and G.N. Petrovskiy (0). Determining the parameters of round graded-index fiber optics. ZhPS, v. 37, no. 1, 1982, 137-142.

297. Chernykh, V.A. (1). Study on nonlinear optical waveguides in $LiNbO_3$. Fizicheskiy institut AN SSSR. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 10452)

298. Doicaru, V., and I.A. Cartianu (NS). Laser system for digital data transmission. Patent Romania, no. 70895, 22 Jan 1981. (RZhRadiot, 7/82, 7Ye270)

299. Drazhev, M., and V. Stoykov (NS). Fiber-optic transmission of information. Fiziko-matematichesko spisanie, no. 2, 1980-1981, 94-99. (RZhF, 7/82, 7D294)

300. Glass, D., W. Fritzsche, and R. Fechner (NS). Introduction to the first lightguide communications line in the East German communications network. Mitteilungen Institut Post und Fernmeldewesen, no. 1, 1982, 20-23. (RZhRadiot, 8/82, 8Ye303)

301. Glass, D., W. Fritzsche, and R. Fechner (NS). Introduction to the first lightguide communications line in the East German communications network. Fernmeldetechnik, no. 2, 1981, 55-58. (RZhRadiot, 7/82, 7Ye245)

302. Gorbunov, N.M., Yu.V. Grigor'yev, M.Ye. Zhabotinskiy, L.V. Levkin, B.N. Naumov, and A.G. Skleznev (0). Fiber-optic line for communication channels in minicomputer systems. Radiotekhnika, no. 4, 1982, 35-40. (RZhRadiot, 7/82, 7Ye231)

303. Grigor'yants, V.V., M.Ye. Zhabotinskiy, G.A. Ivanov, V.N. Isakov, N.A. Koreneva, A.G. Novikov, V.V. Petyukevich, and V.V. Storozhev (0). Fabrication of Gradan lightguides on the UIZS-1-model automated device. Radiotekhnika, no. 3, 1982, 70-75. (RZhRadiot, 7/82, 7Ye302)

304. Grigor'yants, V.V., A.V. Zigunskaya, G.A. Ivanov, N.A. Koreneva, Yu.K. Chamorovskiy, and V.V. Shemet (0). Effect of quartz reference tubes on the magnitude of light attenuation in fiber lightguides. Radiotekhnika, no. 4, 1982, 25-30. (RZhF, 7/82, 7D825)

305. Grigor'yants, V.V., V.I. Smirnov, and Yu.K. Chamorovskiy (15). Broadband optical generation in fiber lightguides. KE, no. 7, 1982, 1322-1331.

306. Grigor'yants, V.V., A.A. Zamyatin, G.A. Ivanov, V.N. Isakov, N.A. Koreneva, V.V. Storozhev, Yu.K. Chamorovskiy, and S.V. Shreyber (15). Wide-aperture fiber lightguides. KE, no. 7, 1982, 1474-1476.

307. Gulyayev, Yu.V., V.P. Konyayev, V.T. Potapov, V.P. Sosnich, and B.B. Elenkrig (15). Device for measuring backscattering in lightguides. Otkr izobr, no. 45, 1981, 887968. (RZhRadiot, 8/82, 8Ye200)

308. Hoeger, H., and D. Oertel (NS). Data transmission in computer technology by means of lightguide cables. Fernmeldetechnik, no. 1982, 13-16. (RZhRadiot, 7/82, 7Ye269)

309. Kalosha, V.P., and A.P. Khapalyuk (0). Transverse cross-section method for an irregular active thin-film waveguide of finite length. Sb 17, 65-87. (RZhF, 8/82, 8D342)

310. Kleparskaya, T.V., L.L. Ploshay, V.I. Smirnov, V.P. Filimonov, and V.G. Chertov (0). Technology for assembling an optical cable under field conditions. Radiotekhnika, no. 4, 1982, 78-80. (RZhRadiot, 7/82, 7Ye160)

311. Kress, D. (NS). Systems theory approach to problems of lightguide transmission technology. Nachrichtentechnik-Elektronik, no. 2, 1982, 49-52,46. (RZhRadiot, 7/82, 7Ye244)

312. Lamekin, V.F., and A.S. Savrasov (0). Use of optoelectronic modules in information transmission devices. Sb 18, 117-121. (RZhRadiot, 7/82, 7Ye259)

313. Maslennikov, V.L., Yu.A. Sarkisov, V.A. Sychugov, A.V. Tishchenko, and Yu.F. Fedorov (1). Two-channel integrated optical multiplexer operating in a reserve system. ZhTF P, no. 14, 1982, 862-866.

314. Mironov, Yu.M. (1). Study on the characteristics of injection semiconductor lasers for optical communication lines. Fizicheskiy institut AN SSSR. Dissertation, 1981, 15 p. (KLDVAD, 7/82, 10399)

315. Nowak, W., and U. Joerges (NS). Nonreciprocal multipaths for arbitrarily polarized light. Patent GDR, no. 213207, 21 Oct 1981. (RZhRadiot, 8/82, 8Ye260)

316. Onishchuk, A.G., and V.A. Cherenkov (0). Optimization of the transmitting properties of lightguides by means of optical couplers. IAN B, no. 1, 1982, 99-103. (RZhF, 8/82, 8D404)

317. Petrovskiy, G.T., V.P. Red'ko, and O.D. Shlyakhtichev (0). Inhomogeneous planar optical waveguides based on fluorine-containing glass. DAN B, no. 3, 1982, 222-224. (RZhF, 7/82, 7D299)

318. Rakocevic, S., S. Dugandzija, and S. Mudric (NS). System for controlling the operation of laser transmitters. Naucno-tehnicki pregled Vojnotehnicki institut, no. 8, 1981, 39-44. (RZhF, 7/82, 7D792)

319. Shitov, V.V., V.V. Grigorash, and A.A. Shkalov (0). Study on the optomechanical characteristics of fiber optics. Elektrosvyaz', no. 8, 1982, 8-11.

320. Sychugov, V.A. (1). Microoptic and integrated optic demultiplexers in fiber-optic communications systems. Fizicheskiy institut AN SSSR. Preprint, no. 11, 1982, 44 p. (RZhF, 7/82, 7D790)

321. Teplyakov, I.M., B.V. Roshchin, A.I. Fomin, and V.A. Veytsel' (116). Laser information transmitting systems. Chapter in book: Radiosistemy peredachi informatsii (Radio information transmitting systems). Moskva, Radio i svyaz', 1982, 83-114.

322. Vanichkin, P.G., V.M. Vatutin, A.I. Vagin, M.D. Kontorov, Yu.I. Monin, and A.A. Nikolayev (0). Fiber-optic information transmission lines in automatic control systems for charged particle accelerators. Radiotekhnika, no. 4, 1982, 30-35. (RZhF, 8/82, 8V425)

323. Vasilishin, V.L., A.P. Dovgan', M.I. Drobot, I.M. Sen'ko, and A.I. Ektov (0). Optical videorecording channel. TKiT, no. 7, 1982, 46-47.

324. Vlasov, M.A., G.G. Devyatykh, Ye.M. Dianov, V.G. Plotnichenko, I.V. Skripachev, V.K. Sysoyev, and M.F. Churbanov (1). Glassy As_2Se_3 with 60 dB/km optical absorption. KE, no. 7, 1982, 1465-1466.

325. Voronov, A.P., M.B. Kosmyna, A.P. Ostroumenko, V.P. Prudkiy, E.F. Chaykovskiy, and A.V. Shmal'ko (0). Optical waveguides based on epitaxial layers of lithium niobate. ZhTF P, no. 13, 1982, 806-810.

326. Yakubaytis, E.A., and Ye.Ya. Finkel'shteyn (0). Fiber-optic channels for local computer networks. Avtomatika i vychislitel'naya tekhnika, no. 2, 1982, 3-8. (RZhRadiot, 7/82, 7Ye268)

C. BEAM PROPAGATION

1. In the Atmosphere

327. Almayev, R.Kh., L.P. Semenov, and A.G. Slesarev (220). Spatial variation of induced fluctuations in the intensity of radiation during probing of a dispersed medium. KE, no. 8, 1982, 1565-1571.

328. Godlevskiy, A.P., A.K. Ivanov, and Yu.D. Kopytin (0). Atmospheric laser spectrometer with a removable resonator mirror. OiS, v. 53, no. 1, 1982, 150-154.

329. Gordin, M.P., and G.M. Strelkov (0). Effect of thermal distortions on the dispersal of a cloud medium by a laser beam. RiE, no. 8, 1982, 1457-1461.

330. Lopasov, V.P., Yu.N. Ponomarev, and B.A. Tikhomirov (78). Study on nonlinear absorption by H_2O vapor in a high-power linearly and circularly polarized optical field. KE, no. 8, 1982, 1724-1727.

331. Necsoiu, T., T. Zisu, and L. Teodorescu (NS). Optimizing the detection of reflected laser signals in a rangefinding system. SCF, no. 2, 1982, 205-216. (RZhRadiot, 8/82, 8Ye458)

332. Sinyavskiy, A.V. (0). Probing of the atmosphere by a c-w lidar. IAN Arm, no. 1, 1982, 39-41. (RZhF, 8/82, 8D1114)

333. Stepanenko, V.D., and B.I. Vdovin (207). The Soviet-American experiment on the study of formation and transformation of a natural aerosol: the Abastuman Background Aerosol Experiment, 1979 (ABEX-79) [AFAEKS-79 in the Russian version]. Tr 5, 52-57.

334. Torgovichev, V.A. (51). Lidar Raman spectroscopy of air pollution. Kiyevskiy GU. Dissertation, 1981, 22 p. (KLDVAD, 7/82, 10439)

335. Zuyev, V.Ye., E.V. Makiyenko, and I.E. Naats (78). Determining the optical properties of stratospheric aerosols by ground-based lidars. DAN SSSR, v. 265, no. 5, 1982, 1105-1107.

2. In Liquids

336. Kopelevich, O.V. (69). Optical properties of ocean water. Institut okeanologii AN SSSR. Dissertation, 1981, 39 p. (KLDVAD, 8/82, 12062)

337. Shifrin, K.S., and M.M. Moiseyev (690). Variability of molecular light scattering in ocean water. Deposit at VINITI, no. 2092-82, 29 April 1982, 6 p. (DR, 8/82, '60)

3. Theory

338. Aben, Kh., B. Krasnovski, and I. Pindera (0). Nonrectilinear propagation of light in integrated photoelasticity of bodies of revolution. IAN Est, no. 1, 1982, 65-73. (RZhF, 8/82, 8D310)

339. Adonts, G.G., and S.G. Piloyan (0). Faraday and Cotton-Mouton effects in gases in an intense optical field. OiS, v. 53, no. 1, 1982, 114-117.

340. Belov, V.V. (132). Monte-Carlo solution of problems in viewing theory and laser probing. Tomskiy GU. Dissertation, 1981, 23 p. (KLDVAD, 8/82, 12072)

341. Bel'skiy, A.M., T.M. Nesterenko, and A.P. Khapalyuk (0). Generalized Gaussian beams in square-law inhomogeneous media. Sb 17, 19-42. (RZhF, 8/82, 8D312)

342. Budak, V.P., and V.I. Savenkov (19). Analysis of transient light fields of elementary pulsed radiators. Tr 3, 50-59.

343. Gerasimov, B.P., and T.G. Yelizarova (71). Thermal self-action of a light beam in the presence of free convection. Institut prikladnoy matematiki AN SSSR. Preprint, no. 83, 1981, 24 p. (KL, 29/82, 26109)

344. Grigor'yev, S.V. (19). Scattering of a fluctuating light wave by a two-level atom. Tr 3, 73-80.

345. Karamzin, Yu.N., A.P. Sukhorukov, and V.A. Trofimov (2). Optimum control of a wavefront and the time profile of optical radiation propagating in a nonlinear medium. VMU, no. 4, 1982, 18-21.

346. Kas'yanov, V.A., and A.N. Starostin (19). Using a diffusion approximation to estimate the threshold intensities in resonant optical breakdown of gases. Tr 3, 80-83.

347. Kirichenko, T.K. (2). Numerical study on the small-scale spatial structure of light pulses in amplifying and absorbent media. Moskovskiy GU. Dissertation, 1981, 11 p. (KLDVAD, 7/82, 10244)

348. Kiselev, V.A., and A.M. Prokhorov (1). Focused and transversely bounded surface waves. KE, no. 7, 1982, 1437-1442.

349. Kovalev, I.S. (0). Dependence of the refractive index and damping coefficient on the angle of incidence of an electromagnetic wave on a semiconductor medium. IAN B, no. 1, 1982, 110-114. (RZhF, 8/82, 8D315)

350. Lebedev, A.K. (19). Multiphoton bremsstrahlung processes. Tr 3, 15-21.

351. Luzgin, S.N. (2). Recoil effects in a resonant light field. Moskovskiy GU. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 10382)

352. Mykityuk, V.I. (51). Diffraction of laser radiation by a regular domain structure. Kiyevskiy GU. Dissertation, 1981, 17 p. (KLDVAD, 8/82, 12127)

353. Osipov, Yu.V., and V.N. Popov (110). Evaluating optical beam divergence by use of a shift interferometer. IVUZ Priboro, no. 7, 1982, 91-94.

354. Remizovich, V.S., D.B. Rogozkin, M.I. Ryazanov (16). Propagation of a narrow modulated optical beam in a scattering medium, allowing for fluctuations in photon paths due to multiple scattering. IVUZ Radioelektr, no. 8, 1982, 891-898.

355. Solodov, A.A. (0). Optimum detection of digital optical signals in communications systems with direct photodetection. RiE, no. 8, 1982, 1606-1612.

356. Strelkov, S.A., T.A. Sushkevich, and T.Ya. Pshenichnaya (71). Isolines of polarized radiation reflected by a plane layer. Institut prikladnoy matematiki AN SSSR. Preprint, no. 180, 1981, 28 p. (RZhF, 8/82, 8D328)

357. Sychugov, V.A., and A.V. Tishchenko (1). Propagation and conversion of optical waves in corrugated waveguide structures. KE, no. 7, 1982, 1451-1458.

358. Tatarskiy, V.I. (64). Quantum noise in adaptive optical systems. Part 1. IVUZ Radiofiz, no. 8, 1982, 882-890.

359. Tkachuk, G.B. (19). Statistical properties of light reflected from a medium. Tr 3, 10-14.

360. Veklenko, B.A. (19). Refraction of a polyphoton beam by the interface of two transparent media. Tr 3, 3-9.

361. Veklenko, B.A., and I.V. Gvozdovskiy (19). Scattering of fluctuating light generated by population inversion in a medium. Tr 3, 32-35.

362. Vlasov, R.A., V.A. Pastushenko, and V.A. Tsurko (693). Numerical solution of problems on self-induced transparency during light beam scanning. Institut matematiki AN BSSR. Preprint, no. 11/136, 1982, 16 p. (RZhF, 7/82, 7D1056)

363. Yakovlev, A.A. (0). Planning of measurements in inverse problems of optical probing. FAiO, no. 8, 1982, 885-886.

D. COMPUTER TECHNOLOGY

364. Bryskin, V.V., and L.I. Korovin (4). The dynamics of photoinduced charge and electric field distribution in crystals. FTT, no. 7, 1982, 2030-2036.

365. Davydkina, V.Yu., V.N. Karnaukhov, and N.S. Merzlyakov (201). Digital holography. Brief review and bibliographic index with automated publication retrieval. Deposit at VINITI, no. 1629-82, 6 April 1982, 105 p. (RZhF, 8/82, 8D1046)

366. Guk, A.V., P.I. Kolennikov, V.R. Malakhovskiy, Ye.G. Mukhina, V.A. Pilipovich, and A.G. Sobolev (299). Study on matrix PLZT ferroceramic page composers. KE, no. 7, 1982, 1510-1512.

367. Ivanov, V.N., V.A. Nikitin, and N.A. Yakovenko (212). Research and development of optical decoders. IVUZ Priboro, no. 7, 1982, 50-54.

368. Lisovets, Yu.P., and A.S. Pospelov (0). Holographic Walsh transform. Sb 19, 69-73. (RZhRadiot, 7/82, 7Ye444)

369. Mikla, V.I., D.G. Semak, and A.A. Kikineshi (136). Relaxation processes in Cu-As-Se layers under pulsed pumping and optical recording. UFZh, no. 7, 1982, 1100-1102.

370. Perchi, Z.I. (3). Research and development of automated laser systems with continuous tuning for analytical problems. Institut fiziki AN BSSR. Dissertation, 1981, 17 p. (KLDVAD, 8/82, 12139)

371. Shanin, V.I. (7). Study on the possibility of using matched optical filtering for controlling the geometry of details in the construction of precision devices. OMP, no. 7, 1982, 15-17.

372. Shustov, M.A., and Yu.A. Zakharov (197,535). Optical recording of information on mixed composition photographic halide layers. ZhNiPFiK, no. 4, 1982, 251-254.

373. Yesepkina, N.A., B.A. Kotov, Yu.A. Kotov, A.V. Mikhaylov, S.V. Pruss-Zhukovskiy, and A.I. Shishkin (0). Hybrid optodigital information processing systems using charge-coupled devices. RiE, no. 8, 1982, 1622-1630.

E. HOLOGRAPHY

374. Bazhenov, V.Yu., N.M. Burykin, M.V. Vasnetsov, M.S. Soskin, and V.B. Taranenko (5). Study on variation in optical characteristics of layers of bichromated gelatin during holographic recording. Stages of latent images. UFZh, no. 7, 1982, 1018-1022.

375. Benken, A.A., and D.I. Stasel'ko (0). Optical scattering during the formation of latent images by laser pulses. ZhTF, no. 7, 1982, 1462-1465.

376. Denisyuk, Yu.N. (0). Characteristics of wavefront reversal by a dynamic 3D Doppler hologram. ZhTF, no. 7, 1982, 1338-1345.

377. Dukhovnyy, A.M., and D.I. Stasel'ko (0). Nonstationary amplification of dynamic holograms in a field of spatially inhomogeneous light beams. ZhTF P, no. 16, 1982, 1009-1014.

378. Dymshits, V.T., A.V. Sulima, and V.I. Kholodov (34). Use of a photographic reducing method in radiohologram compression. Deposit at VINITI, no. 2063-82, 28 April 1982, 9 p. (DR, 8/82, 406)

379. Freyer, R., W. Hinz, J. Mildner, and W. Telle (NS). Thermoplastic film and camera for hologram recording. JS, no. 1, 1982, 47-54. (RZhRadiot, 7/82, 7Ye454)

380. Kaplun, L.Ya., E.F. Klimzo, and E.N. Sergeyeva (96). PL-ZM high-sensitivity holographic films. ZhNiPFiK, no. 4, 1982, 293-295.

381. Kowarschik, R. (NS). Simultaneous diffraction of two waves in transmission volume holograms. Annalen der Physik, no. 6, 1981, 396-404. (RZhF, 7/82, 7D856)

382. Markov, V.B., and I.G. Yevtushenko (0). Holography and museums. Bild und Ton, no. 2, 1982, 37-42,64. (RZhRadiot, 7/82, 7Ye466)

383. Megrelishvili, R.Sh. (118). Effects of small apertures in holography. Moskovskiy fiziko-tekhnicheskiy institut. Dissertation, 1981, 16 p. (KLDVAD, 8/82, 12122)

384. Nadtochiy, A.A. (0). Introscopic measurement of irregularities in dielectric products by means of radiohologrаphy. IT, no. 8, 1982, 21-23.

385. Ovechkis, Yu.N. (231). Study on aberration characteristics of holographic screens. TKiT, no. 7, 1982, 28-31.

386. Pilipetskiy, N.F., A.N. Sudarkin, and V.V. Shkunov (17). Amplification of waves and parametric oscillation by surface dynamic holograms. DAN SSSR, v. 265, no. 2, 1982, 324-327.

387. Sarychev, V.P., E.G. Semenov, and S.Ye. Solodov (0). Laser interferogram decoder. IT, no. 7, 1982, 36-38.

388. Serdyuk, V.M., and A.P. Khapalyuk (0). Diffraction of optical waves by a volume hologram in an anisotropic medium. ZhPS, v. 37, no. 1, 1982, 132-136.

389. Shitov, V.G., G.I. Geysukh, V.A. Vanin, and M.M. Butusov (0). Method for analyzing wave aberration in two-component holographic objectives. OiS, v. 53, no. 1, 1982, 130-134.

390. Shvartsval'd, A.I., P.K. Pudozhgorskiy, V.I. Boyev, and I.I. Boyko (696). Application of synthetic 4-thioazolidincarbon acid as a stabilizer of latent image centers in silver halide materials in holography. Otkr izobr, no. 30, 1982, 951221.

391. Vinetskiy, V.L., N.V. Kukhtarev, M.S. Soskin, and G.A. Kholodar' (5). Holographic method for converting optical beams. Otkr izobr, no. 32, 1982, 657395.

392. Yakimovich, A.P. (75). Diffraction efficiency of out-of-phase amplitude-phase volume holograms. KE, no. 7, 1982, 1447-1450.

393. Yarichin, Ye.M. (0). Adaptive data compression in multichannel phase acoustic holography systems. Sb 20, 121-128. (RZhRadiot, 7/82, 7Ye441)

F. LASER-INDUCED CHEMICAL REACTIONS

394. Abakumov, G.A., B.I. Polyakov, A.P. Simonov, L.S. Chuyko, and V.T. Yaroslavtsev (0). Stepped photoionization of anthracene in gas phase under the effect of pulsed UV laser radiation. OiS, v. 53, no. 2, 1982, 258-262.

395. Aleksakhin, I.S., S.B. Zagrebin, D.A. Ozolin'sh, A.V. Samson, I.I. Shafran'osh, and T.A. Shishova (0). Effective cross-section for pumping barium atoms from the metastable 5^1D_2 state by electron impact. OiS, v. 53, no. 2, 1982, 375-378.

396. Aleshkevich, N.I., N.V. Karlov, and Ye.F. Titkov (1,379,334). Luminescent quantum yield of alkali halide uranyl nitrates in the 110-250 nm region. KSpF, no. 7, 1982, 34-40.

397. Anisimov, S.I., S.M. Gol'berg, and M.I. Tribel'skiy (73). Spin regimes of sublimation of solids under the effect of laser radiation. ZhETF, v. 82, no. 5, 1982, 1604-1606.

398. Antonov, V.S., S.Ye. Yegorov, V.S. Letokhov, Yu.A. Matveyets, and A.N. Shibanov (72). Observing the ejection of chromophore ions from complex surface molecules under the effect of picosecond UV laser pulses. ZhETF P, v. 36, no. 2, 1982, 29-31.

399. Apatin, V.M., and G.N. Makarov (72). Multiphoton absorption spectra of SF_6 under conditions of essentially collisionless excitation of the molecule by a CO_2 laser pulse. KE, no. 8, 1982, 1668-1672.

400. Askar'yan, G.A., and Ye.K. Karlova (1). Laser cleaning of oil and fuel spots from road surfaces. KE, no. 7, 1982, 1469-1470.

401. Baklanov, A.V., V.V. Vizhin, and A.K. Petrov (295). Comparative study on multiphoton IR dissociation of CHF_2Cl, C_2H_4FCl, C_3H_6FCl and C_4H_8FCl molecules. KE, no. 7, 1982, 1361-1365.

402. Beterov, I.M., and N.V. Fateyev (0). Anomalous temperature dependence of laser-induced formation of SF_6^- ions on a tungsten surface. Khimicheskaya fizika, no. 4, 1982, 475-478. (RZhF, 8/82, 8D1384)

403. Danilov, V.P., V.I. Zhekov, T.M. Murina, L.Ye. Nagli, and A.M. Prokhorov (1). Photoionization of mercury-like ions in alkali halide crystals under pumping of A and C absorption bands. KSpF, no. 7, 1982, 25-28.

404. Danilov, V.P., V.I. Zhekov, T.M. Murina, L.Ye. Nagli, and A.M. Prokhorov (1). Photoionization cross-sections for excited states of some mercury-like ions in alkali halide crystals. KE, no. 7, 1982, 1466-1469.

405. Delone, N.B., and V.I. Tugushev (1). Multiphoton ejection of an electron from a negative ion. Fizicheskiy institut AN SSSR. Preprint, no. 208, 1982, 58 p.

406. Delone, N.B., F.A. Il'kov, I.V. Steklova, and V.I. Tugushev (1). Tunnel ionization in a variable field. Fizicheskiy institut AN SSSR. Preprint, no. 209, 1982, 37 p.

407. Delone, N.B., and V.P. Kraynov (1). Two-photon ionization of highly excited atoms. Fizicheskiy institut AN SSSR. Preprint, no. 218, 1982, 17 p.

408. Mal'tsev, Ye.I., A.B. Kruglov, I.S. Shpileva, and A.V. Vannikov (335). Mechanism of image formation in light-sensitive layers based on complexes with charge transfer. ZhNiPFiK, no. 4, 1982, 298-300.

409. Margolin, A.D., and V.M. Shmelev (0). Thermal instability of a molecular gas during absorption of resonance radiation. Khimicheskaya fizika, no. 5, 1982, 679-684. (RZhF, 8/82, 8D1380)

410. Shil'nikov, Ye.V. (337). Numerical study on the motion of a gas under the action of focused laser radiation. Vychislitel'nyy tsentr AN SSSR. Dissertation, 1981, 11 p. (KLDVAD, 7/82, 10287)

411. Strunin, V.P. (295). Modeling and evaluating the effects of c-w CO_2 laser radiation on photobromination of CH_3F in a cylindrical reactor. Kinetika i kataliz, no. 4, 1982, 785-792.

412. Vaksman, M.A. (0). Saturation photodissociation of a diatomic gas under the effect of laser radiation. OiS, v. 53, no. 2, 1982, 263-269.

413. Volkov, S.V., A.F. Gurko, and V.I. Lutoshkin (512). Study on IR laser chemical reactions in the three-component BCl_3-CH_4-H_2 system. Ukrainskiy khimicheskiy zhurnal, no. 5, 1982, 451-453.

414. Yalamov, Yu.I., Ye.R. Shchukin, L.G. Eydinov, and Z.L. Shulimanova (0). Surface combustion of aerosol particles heated by an internal heat source. FGiV, no. 4, 1982, 42-44.

G. MEASUREMENT OF LASER PARAMETERS

415. Alekseyev, A.G., V.I. Drozdov, V.I. Kukhtevich, and A.I. Trubnikov (0). Measuring the energy of pulsed laser radiation. IT, no. 7, 1982, 31-33.

416. Aver'yanov, K.P., S.G. Alekseyev, and M.M. Gel'man (0). Calorimetric device. Author's certificate USSR, no. 872986, 18 Oct 1981. (RZhRadiot, 7/82, 7Ye344)

417. Balakin, V.A., A.S. Burmistrov, S.B. Kotel'nikov, and A.I. Popov (0). Intracavity methods for measuring small optical losses by means of He-Ne lasers. Sb 3, 17-30. (RZhRadiot, 8/82, 8Ye444)

418. Bardyukov, A.M., M.E. Berg, and I.F. Grigor'yev (0). Determining the phase energy distribution in the transverse cross-section of IR laser beams. Sb 21, 45-47. (RZhRadiot, 7/82, 7Ye329)

419. Bondarev, V.A., A.S. Kleyman, and I.V. Tomashko (0). Apparatus for measuring the absolute values of laser frequencies. Sb 20, 83-86. (RZhRadiot, 7/82, 7Ye331)

420. Borovskiy, I.V., and N.A. Khizhnyak (34). Scattering of electromagnetic waves by a dielectric echelette. Khar'kovskiy GU. Vestnik, no. 227, 1982, 23-28. (RZhRadiot, 7/82, 7Yel6)

421. Bukhman, A.B., Ye.M. Dianov, A.Ya. Karasik, V.A. Kozlov, A.M. Prokhorov, and A.K. Senatorov (1). Using high-frequency oscillations in laser intensity for optical measurements. ZhTF P, no. 15, 1982, 897-900.

422. Burmistrov, A.S., and A.I. Popov (0). Study on the sensitivity of an intracavity method for determining weak optical losses in a c-w gas laser. ZhPS, v. 37, no. 2, 1982, 205-209.

423. Garkavenko, A.S., V.V. Kalendin, and A.V. Pedorenko (0). Optical digital pulsed phasometers. Sb 21, 41-44. (RZhRadiot, 7/82, 7Ye338)

424. Gorlin, G.B., I.I. Komissarova, G.V. Ostrovskaya, Yu.I. Ostrovskiy, L.G. Paritskiy, V.N. Filippov, and Ye.N. Shedova (4). Spectrograph for spectral analysis of IR laser pulses. PTE, no. 4, 1982, 207-208.

425. Ivanov, V.Ye., M.E. Romash, and A.S. Timofeyev (19). Goniometer for measuring the data and dimensions of optical Gaussian beams. Tr 3, 26-32.

426. Klyshko, D.N. (2). Generalized Kirchhoff's laws and absolute quantum photometry. IAN Fiz, no. 8, 1982, 1478-1485.

427. Larikov, A.V., A.A. Malyutin, and A.N. Filippov (1). Linear or circular? Selecting the polarization in the development of stages of high-power laser systems. Fizicheskiy institut AN SSSR. Preprint, no. 225, 1982, 36 p.

428. Lasers. Methods for measuring radiation parameters. General propositions. State standard USSR, GOST 24714-81. (RZhRadiot, 7/82, 7Ye2)

429. Levi, A.M. (0). Instrument for measuring the energy of pulsed laser radiation. Sb 22, 121-125.

430. Smirnov, Ye.A., and Zh.P. Salonnikova (0). Passive stabilization of the radiation power of gas-discharge lasers. Sb 4, 28-34. (RZhRadiot, 7/82, 7Ye103)

431. Stepanov, B.M. (141). Metrology of laser radiation. IAN Fiz, no. 8, 1982, 1632-1637.

432. Yurevich, V.A. (321). Effect of nonlinearity of the refractive index on laser output power. DAN B, no. 7, 1982, 600-603.

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

433. Abdukadyrova, I.Kh., L.N. Skuya, and A.R. Silin' (85,585). Formation of non-bridge-forming oxygen atoms during neutron irradiation of α-quartz. FiKhS, no. 4, 1982, 500-502.

434. Aleshin, V.A., and M.N. Dubrov (15). Method for decoupling lasers and interferometers. Otkr izobr, no. 28, 1982, 784457.

435. Alimov, K.K., M.M. Butusov, S.N. Gulyayev, and V.V. Solov'yev (0). Eliminating phase instabilities in a fiber optic interferometer. IVUZ Radioelektr, no. 8, 1982, 76-78.

436. Anan'yev, A.V., A.M. Bardyukov, and V.V. Kalendin (0). Phase methods for diagnostics of a laser quantoscope screen. Sb 21, 5-17. (RZhRadiot, 7/82, 7Ye383)

437. Andronova, I.A., I.L. Bershteyn, and Yu.I. Zaytsev (426). Limit capabilities for laser microphasometry. IAN Fiz, no. 8, 1982, 1590-1593.

438. Arkhipov, V.V., V.N. Bodunova, and B.V. Vylegzhanin (7). High-speed line scanning Fourier spectrometer with a computer complex. OMP, no. 7, 1982, 33-34.

439. Avetisov, E.S., R.A. Gindorova, S.L. Shapovalov, D.G. Begishvili, V.N. Tarasenkov, and Ye.Sh. Shapiro (417). Laser retinometry in the presence of lenticular opacities. Vestnik oftal'mologii, no. 4, 1982, 57-60.

440. Bakos, J., and P. Ignacz (NS). Nonlinear laser plasma diagnostics. Magyar fizikai folyoirat, no. 5, 1981, 461-475. (RZhF, 7/82, 7G337)

441. Barabas, M., and Sz. Tokes (NS). Image shaping errors in a laser printer and their optical correction. Magyar Tudomanyos Akademia Szamitastechnikai es automatizacios kutato intezet. Tanulmanyok, no. 130, 1982, 48 p. (RZhRadiot, 8/82, 8Ye492)

442. Barabash, Yu.M., A.A. Kozak, N.G. Kuvshinskiy, I.I. Lyashko, N.G. Nakhodkin, and S.I. Soroka (51). Holographic method for determining the rheological characteristics of thin thermoplastic films. Otkr izobr, no. 27, 1982, 945846.

443. Barbanel', I.S., and M.G. Mal'tsev (0). Coherent homodyne refractometers. ZhNiPFiK, no. 4, 1982, 295-298.

444. Bardinov, A.A., V.A. Burtsev, V.A. Kubasov, B.V. Lyublin, and V.N. Litunovskiy (247). Using laser scattering for diagnostics of a fast linear theta-pinch plasma. NII elektrofizicheskoy apparatury. Preprint, no. P-K-0557, 1982, 15 p. (RZhF, 8/82, 8G430)

445. Berezin, A.B., V.A. Burtsev, A.G. Smirnov, and V.G. Smirnov (247). Holographic detection of losses in the coherence of laser radiation probing a fast linear theta-pinch plasma. NII elektrofizicheskoy apparatury. Preprint, no. NIIEFA P-K-0502, 1981, 20 p. (KL, 29/82, 26104)

446. Besekerskiy, V.A., and N.P. Pelevina (277). Optimum correction of laser gyroscopes in orientation systems. IVUZ Priboro, no. 7, 1982, 55-58.

447. Bezdetnyy, N.M., A.I. Bezhanova, M.F. Dubovik, Ye.A. Drogaytsev, and V.G. Sil'vestrov (86,188). Temperature dependence of residual optical transparency in lithium niobate single crystals. NM, no. 7, 1982, 1399-1201.

448. Birman, A.Ya., A.F. Savushkin, and V.A. Solomatin (0). Asymmetry of the coupling coefficients for opposed waves in a ring laser. OiS, v. 53, no. 1, 1982, 174-176.

449. Bukhman, A.B., Ye.M. Dianov, A.Ya. Karasik, V.A. Kozlov, and A.M. Prokhorov (0). Fiber-optic rotation sensor. Radiotekhnika, no. 4, 1982, 56-58. (RZhF, 8/82, 8A221)

450. Chernukh, A.M. (658). Experimental biomicroscopy of microcapillaries: feasibility, limits and prospects. Vestnik AMN SSSR, no. 7, 1982, 3-11.

451. Derkacheva, L.D., A.I. Krymova, V.A. Petukhov, and N.S. Platonov (0). Kinetics of a photoprotolytic reaction in a coumarin dye solution. OiS, v. 53, no. 1, 1982, 73-78.

452. Derus, P.S., V.N. Kudryavtsev, and T.F. Alekseyeva (0). Measuring converter for angular motion. Otkr izobr, no. 27, 1982, 945651.

453. Divnogortsev, M.Yu., S.A. Zhgun, M.Yu. Nikitin, and A.M. Shkalov (19). Probe for recording surface acoustic waves. Tr 2, 50-53.

454. Dmitriyev, G.S., S.K. Yakubovich, Yu.N. Kulachkovskiy, K.N. Chernov, O.Ye. Merzlikin, V.I. Korolev, V.G. Zhirnov, and A.N. Strel'tsov (695). Device for monitoring rotating bodies. Otkr izobr, no. 27, 1982, 945695.

455. Garkavenko, A.S., and B.N. Levinskiy (0). Phase and amplitude methods for measuring optical constants of semiconductors in the IR range. Sb 21, 18-30. (RZhF, 8/82, 8D644)

456. Golubev, Yu.M., and V.P. Gryaznevich (0). Effect of trapping on the beat profile for opposed waves in a gas ring laser. OiS, v. 53, no. 2, 1982, 346-348.

457. Gorbunkov, M.V., V.N. Platonov, and M.Ya. Shchelev (1). Study on the time response of a picosecond electrooptic converter with an AgOCs photocathode by means of subpicosecond light pulses at 600 nm. Fizicheskiy institut AN SSSR. Preprint, no. 219, 1982, 20 p.

458. Gorczyca, B., T. Wartanowicz, and A. Zajdel (NS). Laser scattering diagnostics of a low temperature plasma. BAPS Phys, no. 3-4, 1980, 193-198. (RZhF, 8/82, 8G427)

459. Gordeyev, S.V., B.G. Turukhano, V.P. Gorelik, and N. Turukhano (252). Mobile holographic grating as a measuring element in studying an interference field. Leningradskiy institut yadernoy fiziki AN SSSR. Preprint, no. 683, 1981, 18 p. (KL, 28/82, 25081)

460. Gotlib, V.A., N.N. Komarov, and B.I. Molochnikov (0). Stability of polarization interferometers. Sb 23, 53-64.

461. Grinev, A.Yu., and V.S. Temchenko (0). Effect of rejection filter errors on the depth of gap formation in the directional patterns of antenna arrays with coherent optical processing. IVUZ Radioelektr, no. 8, 1982, 14-21.

462. Gritsenko, A.P., V.A. Zhuravlev, F.A. Kudryavitskiy, G.D. Petrov, and V.M. Sysak (0). Device for determining scattering indices of a disperse medium. Author's certificate USSR, no. 851112, 31 July 1981. (RZhF, 7/82, 7D845)

463. Gureyev, B.A., V.V. Bacherikov, A.Ye. Vernyy, M.I. Vortman, and Yu.A. Gol'din (0). Device for measuring the refractive index of water. Otkr izobr, no. 30, 1982, 888667.

464. Gusev, A.P., S.I. Malyshev, and V.P. Shcherbakova (660). Using ellipsometry methods in the production of thermally reflecting glass. Steklo i keramika, no. 8, 1982, 17-18.

465. Kazakov, B.V., and Ye.N. Lekhtsiyer (0). Holographic study on the internal structure of fiber lightguides. Radiotekhnika, no. 3, 1982, 62-65. (RZhRadiot, 7/82, 7Ye469)

466. Kir'yanov, V.P., and V.P. Koronkevich (75). Laser interferometer with low-frequency phase modulation. KE, no. 7, 1982, 1301-1308.

467. Kolobkov, N.S., G.I. Rukman, B.M. Stepanov, and Ye.B. Shelemin (0). Device for recording fast-flow processes. Otkr izobr, no. 28, 1982, 778539.

468. Korolev, A.M. (24). Study on modulation interferometry and the development of devices based on the Doppler effect for measuring the parameters of vibration. Moskovskoye vyssheye tekhnicheskoye uchilishche. Dissertation, 1981, 15 p. (KLDVAD, 7/82, 10949)

469. Kougiya, V.A., V.D. Petrov, O.P. Sergeyev, A.F. Isayev, and Ye.A. Lebedev (0). Geodesic studies during the construction of an underwater tunnel. Geodeziya i kartografiya, no. 8, 1982, 16-20.

470. Kozachok, A.G. (0). Automation of studies on strength by means of coherent optics and holographic methods. Avtometriya, no. 4, 1982, 45-51.

471. Kozlov, L.F., V.P. Ivanov, V.V. Babenko, and V.A. Blokhin (405). Study on the tunability and transition structure of a plate boundary layer by means of a laser anemometer. I-FZh, v. 43, no. 1, 1982, 16-20.

472. Kuznetsov, V.V., I.I. Lushchikov, S.V. Mamakina, V.K. Sakharov, V.M. Tikhonov, and V.A. Frolov (0). Holographic correlation spectrometer. Sb 21, 56-60. (RZhF, 7/82, 7D840)

473. Larikov, A.V., A.A. Malyutin, and A.N. Filippov (1). Methods for automated measurements and processing of submillisecond optical signals. Fizicheskiy institut AN SSSR. Preprint, no. 234, 1982.

474. Leont'yeva, I.G. (254). Development of methods for determining stresses in cross-sections of three-dimensional models by means of polarization holographic interferometry in photoelastic studies. Moskovskiy inzhenerno-stroitel'nyy institut. Dissertation, 1981, 17 p. (KLDVAD, 7/82, 11044)

475. Mamilyayev, R.M., I.P. Nalimov, V.M. Antonov, and A.Kh. Shakirov (354,231). Technology and method of bronchology. Meditsinskaya tekhnika, no. 4, 1982, 43-46.

476. Mel'nichenko, I.A., and V.I. Silayev (565). Laser for holographic recording of tracks in a bubble chamber. Institut teoreticheskoy i eksperimental'noy fiziki. Preprint, no. 28, 1982, 11 p. (KL, 28/82, 25111)

477. Methods for measuring surface roughness based on laser speckle analysis. JMO, no. 2, 1982, 37-41. (RZhRadiot, 7/82, 7Ye371)

478. Myakinin, V.A. (64). Coherent optical analyzer of the spatial spectra of two-dimensional signals. Otkr izobr, no. 36, 1981, 868619. (RZhF, 8/82, 8D960)

479. Neumann, W., and R. Hillebrand (NS). Photointerpretation of electron micrographs by means of optical diffractometry. Sb 24, 268-269. (RZhF, 8/82, 8Zh568)

480. Peysakhson, I.V., N.G. Romanova, and N.Yu. Chernyak (0). Simplified method for evaluating the parameters of design symmetry for a monochromator with a concave holographic diffraction grating. OiS, v. 53, no. 2, 1982, 369-373.

481. Pospisil, J., and H. Sekanina (NS). Holographic methods for measuring the frequency contrast characteristics of objectives and of photographic films. Sb 25, 81-150. (RZhRadiot, 8/82, 8Ye559)

482. Puryayev, D.T., V.A. Gorshkov, O.N. Fomin, and V.G. Lysenko (7). Study on the surface quality of a sitall parabolic astronomical mirror. OMP, no. 8, 1982, 7-9.

483. Reznik, L.G., I.M. Rybak, and V.V. Shabalov (0). Use of pressed comparison samples for laser microanalysis. Deposit at VINITI, no. 1490-81. (Cited in ZhPS, v. 37, no. 1, 1982, 167)

484. Rokos, I.A., and L.A. Rokosova (0). Ring polarization interferometer. Measuring the rate of transparent flows. OiS, v. 53, no. 2, 1982, 320-327.

485. Rozin'kov, N.S. (0). Using holographic methods to monitor heat fields of elements for radioelectronic apparatus. Sb 26, 3-8. (RZhRadiot, 8/82, 8Ye560)

486. Sergeyev, P.A., and V.N. Sintsov (0). Holographic method for controlling long-focus optical systems. Otkr izobr, no. 32, 524410.

487. Shelkovnikov, N.K., V.V. Rozanov, and A.S. Chirkin (2). Measuring ocean flow rates by means of a laser Doppler hydrometer. ZhTF P, no. 15, 1982, 937-940.

488. Shmal'gauzen, V.I. (2). Adaptive optics methods in laser interferometry. IAN Fiz, no. 8, 1982, 1521-1527.

489. Skvorchevskiy, A.K., Ye.V. Promyslov, A.V. Chadin, and V.N. Lagun (694). Method and device for balancing rotors. Otkr izobr, no. 26, 1982, 943546.

490. Sokolov, A.K., M.M. Sokolov, and V.K. Titov (0). Detecting trace amounts of uranium by laser-pumped luminescence. Zhurnal analiticheskoy khimii, no. 8, 1982, 1466-1468.

491. Sokolov, L.V., A.I. Toropov, M.R. Baklanov, and S.I. Stenin (10). Stability of surface superstructures. ZhFKh, no. 7, 1982, 1809-1811.

492. Stoyanov, D.V., G.V. Kolarov, and O.I. Vankov (NS). Laser Doppler measurements with low-frequency modulation in a photon counting regime. Bolgarskiy fizicheskiy zhurnal, no. 6, 1981, 653-658. (RZhF, 7/82, 7D1107)

493. Ursu, I., D. Apostol, I. Apostol, I. Mihailescu, A. Harsany (Romanians), A.B. Berezin, I.I. Komissarova, G.V. Ostrovskaya, Yu.I. Ostrovskiy, V.N. Filippov, and Ye.N. Shedova (4). IR holographic interferometry. ZhTF, no. 7, 1982, 1432-1435.

494. Vorontsov, M.A., D.V. Pruidze, and V.I. Shmal'gauzen (2). Adaptive optics methods in interferometry. KE, no. 7, 1982, 1366-1373.

495. Voskresenskaya, V.I., V.S. Mozhayskaya, and G.V. Shkal'kova (7). Optical homogeneity of oxygen-free chalcogenide glasses. OMP, no. 8, 1982, 30-32.

496. Yevseyev, A.R., and V.Ye. Nakoryakov (159). Laser Doppler anemometer for studying the structure of a boiling layer. Sb 27, 91-98.

2. Laser-Excited Optical Effects

497. Abdinov, A.Sh., R.R. Agayev, E.Yu. Salayev, and G.S. Seidli (0). Kinetics of photoconductivity in P=$Cd_xHg_{1-x}Te$ single crystals in crossed electric and magnetic fields. DAN Az, no. 7, 1982, 18-20.

498. Abroyan, I.A., V.Ya. Velichko, O.A. Podsvirov, and F.A. Chudnovskiy (0). Effect of electron irradiation on phase transition in VO_2 films. ZhTF P, no. 13, 1982, 775-778.

499. Aksenov, V.P., and B.G. Zhurkin (1). Formation of periodic structures under the effect of high-power coherent radiation on a semiconductor surface. DAN SSSR, v. 265, no. 6, 1982, 1365-1366.

500. Aleksandrov, Ye.B. (0). Laser recording of electron paramagnetic resonance. AN SSSR. Vestnik, no. 8, 1982, 17-23.

501. Andreyev, S.V., V.I. Balykin, V.S. Letokhov, and V.G. Minogin (72). Radiation slow-down and monochromatization of a beam of sodium atoms in an opposed laser beam. ZhETF, v. 82, no. 5, 1982, 1429-1441.

502. Archegova, O.R., and A.F. Yeremina (0). Anomalous thermal conductivity in indium phosphide. FTP, no. 8, 1982, 1525.

503. Baltrameyunas, R., Yu. Vaytkus, and M. Pyatrauskas (49). Study on the mechanism of interaction of picosecond light pulses with gallium arsenide single crystals. FTP, no. 8, 1982, 1524.

504. Baranchuk, S.I., and N.V. Mileshkina (12). Electric field screening and photosensitivity of an InSb cathode. IAN Fiz, no. 7, 1982, 1364-1366.

505. Bazyk, A.I., F.P. Kesamanly, V.F. Kovalenko, I.Ye. Maronchuk, and G.P. Peka (439). Effect of superradiation and carrier drift on photoluminescent characteristics of $Al_xGa_{1-x}As$ variband solid solutions. FTP, no. 7, 1982, 1333.

506. Belenov, E.M., I.N. Kompanets, Yu.M. Popov, I.A. Poluektov, S.I. Sagitov, Ye.M. Soboleva, A.G. Sobolev, A.V. Uskov, and V.G. Tsukanov (1). Amplification of surface plasma vibrations in complex metal-barrier-metal structures. KE, no. 7, 1982, 1463-1464.

507. Belousov, A.V., V.A. Kovarskiy, and E.P. Sinyavskiy (0). Optical properties of molecular systems in a field of low-frequency resonance laser radiation. Sb 7, 3-29. (RZhF, 8/82, 8D1381)

508. Beylin, Ye.L., and B.A. Zon (137). Stimulated bremsstrahlung effect in a multimode laser radiation field. KE, no. 8, 1982, 1692-1694.

509. Brodin, M.S., V.M. Bandura, and M.G. Matsko (5). Luminescence of ZnTe crystals under intense laser pumping: exciton interaction processes in an electron-hole plasma. FTT, no. 8, 1982, 2411-2415.

510. Danilov, V.A., V.V. Popov, A.M. Prokhorov, D.M. Sagatelyan, I.N. Sisakyan, and V.A. Soyfer (1). Synthesis of optical elements produced by a random shaped focal line. ZhTF P, no. 13, 1982, 810-815.

511. Dubnetskiy, B.Ya., and V.M. Semibalamut (159). Theory on resonant interaction of atomic gas with time-separated standing wave pulses. KE, no. 8, 1982, 1688-1691.

512. D'yachenko, N.G., V.G. Remesnik, M.Yu. Trofimenko, A.V. Tyurin, V.G. Tsukerman, and A.S. Sheveleva (282). Optically induced change in photoelectric and optical properties of glassy As_2S_3. UFZh, no. 8, 1982, 1147-1152.

513. Dykman, I.M., and P.M. Tomchuk (5,6). Kinetic equations and parameters of a superlattice formed by a standing laser wave in a semiconductor with heater carriers. UFZh, no. 7, 1982, 1023-1033.

514. Grekhov, I.V., V.A. Kozlov, M.Ye. Levinshteyn, and V.G. Sergeyev (4). High-power microsecond electrooptic switch. ZhTF P, no. 14, 1982, 853-855.

515. Kalechits, V.I., I.Ye. Nakhutin, and P.P. Poluektov (0). Optically induced instability of drops in a standing wave field. KE, no. 7, 1982, 1518-1519.

516. Kanayev, I.F., and V.K. Malinovskiy (75). Photogalvanic and photorefractive effects in lithium niobate crystals. FTT, no. 7, 1982, 2149-2158.

517. Karagodova, T.Ya., and A.I. Karagodov (0). Evaluating the shift in magnetic sublevels of atomic potassium in steady state magnetic and electric fields of laser radiation with various polarizations. OiS, v. 53, no. 2, 1982, 206-210.

518. Kartuzhanskiy, A.L., V.M. Kalyuzhnyy, A.A. Krut', and V.A. Tsendrovskiy (0). Study on the recording of optical images on chromated gelatin using IR spectrophotometry. OiS, v. 53, no. 2, 1982, 380-382.

519. Kirsch, A., R. Schwabe, R. Bindemann, R. Dehmlow, and K. Wandel (NS). Studies of surface recombination processes in photoexcited vapor phase epitaxy GaP:N,Te. PSS, v. A69, no. 2, 1982, 553-561. (RZhF, 8/82, 8Ye-198)

520. Korshunov, A.B., Ye.K. Dubrovskaya, V.I. Sokolov, and O.V. Tikhonova (248). Anomalous acceleration of sulfur diffusion in doped p-InSb. FTP, no. 8, 1982, 1509-1510.

521. Kulish, N.R. (6). Laser commutation of constants and of radio-frequency signals. Sb 2, 57-66.

522. Kyazym-Zade, A.G., V.M. Salmanov, A.A. Agayeva, M.M. Panakhov, A.O. Guliyev, and V.I. Tagirov (86). Residual conductivity in InSe single crystals pumped by radiation from a ruby laser. DAN Az, no. 6, 1982, 20-23.

523. Linnik, L.F., L.G. Linnik, O.F. Manita, and V.T. Aleksandrov (0). Dependence of the nonequilibrium charge carrier concentration in germanium on the intensity of laser excitation. Sb 2, 48-54.

524. Litovchenko, V.G., D.V. Korbutyak, and V.A. Zuyev (6). Observation and study on a quasi-two-dimensional electron-hole condensate. IAN Fiz, no. 8, 1982, 1452-1462.

525. Parkhomenko, A.I., and A.M. Shalagin (75). Optically induced drift during staged excitation of levels. KE, no. 8, 1982, 1658-1668.

526. Polyakov, A.A., V.N. Trukhin, and I.D. Yaroshetskiy (0). Induced gyrotropy, birefringence and dichroism from the excitation of semiconductors by picosecond light pulses. ZhTF P, no. 16, 1982, 1018-1021.

527. Ryvkin, B.S., and M.N. Stepanova (4). Bistable optical characteristics of a resonator photoelement during two-step optical transitions. ZhTF P, no. 15, 1982, 951-954.

528. Strinadko, M.T. (53). Polarization structure of a field formed by random scattering. UFZh, no. 7, 1982, 1098-1100.

529. Syrtlanov, M.R. (0). Study on the characteristics of multiphonon relaxation of Nd^{3+} ions in phosphate glass. Sb 28, 67-69. (RZhF, 7/82, 7D680)

530. Voyshvillo, N.A., and N.I. Shcherbakova (7). Parameters of a speckle pattern formed by the propagation of coherent radiation through milk glass. OMP, no. 7, 1982, 12-15.

531. Yankovskaya, L.B. (51). Effect of electron excitation transfer and photoinduced centers on luminescence in anthracene and benzophenone crystals. Kiyevskiy GU. Dissertation, 1981, 21 p. (KLDVAD, 8/82, 12190)

532. Yeliseyev, A.A., T.N. Popova, O.V. Ravodina, and V.V. Stenina (0). Measuring the relative effective cross-sections for Raman scattering by molecules of hydrogen, oxygen, and water vapors under UV pumping. OiS, v. 53, no. 2, 1982, 328-331.

533. Zelenskiy, A.N., S.A. Kokhanovskiy, and V.M. Lobashev (485). Optical orientation of a dense sodium overcharged target as a source of polarized protons and H^- ions. ZhETF P, v. 36, no. 2, 1982, 21-23.

534. Zinov'yev, N.N., L.P. Ivanov, I.G. Lang, S.T. Pavlov, A.V. Prokaznikov, and I.D. Yaroshetskiy (4). Relaxation of free exciton pulses in semiconductors. ZhETF P, v. 36, no. 1, 1982, 12-15.

535. Zolot'ko, A.S., V.F. Kitiyeva, V.A. Kuyumchyan, N.N. Sobolev, and A.P. Sukhorukov (0). Optically induced second-order phase transition in a spatially limited region in nematic liquid crystals. ZhETF P, v. 36, no. 3, 1982, 66-69.

536. Zuyev, V.A., M.T. Ivaniychuk, D.V. Korbutyak, Yu.V. Kryuchenko, and V.G. Litovchenko (6). Laser excitable luminescence and reflection of light in ion-bombarded layers. Sb 2, 87-95.

3. Laser Spectroscopy

537. Ageyev, V.A., and A.N. Safronov (587). Spectral analysis of the products from electrochemical processing of brass. DAN B, no. 8, 1982, 699-700.

538. Altayskiy, Yu.M., V.L. Zuyev, and E.I. Rybina (106). Photoluminescence of 3C-SiC doped with boron. FTP, no. 8, 1982, 1506-1508.

539. Anoshin, A.N., T.S. Kopteva, K.V. Mikhaylova, I.O. Shapiro, and D.N. Shigorin (122). Study on fluorescence and IR spectra of naphthazarine-d_2. ZhFKh, no. 8, 1982, 1992-1995.

540. Arutyunov, V.A., A.V. Buchin, E.I. Krupitskiy, S.V. Morozov, T.N. Sergeyenko, and V.I. Yakovlev (90). Acoustooptic spectral analyzer. Otkr izobr, no. 30, 1982, 951173.

541. Aslanyan, L.S., N.N. Badalyan, A.A. Petrosyan, M.A. Khurshudyan, and Yu.S. Chilingaryan (0). Determining the cubic optical susceptibilities of liquid crystals by coherent four-photon spectroscopy. OiS, v. 53, no. 1, 1982, 94-99.

542. Avdeyenko, A.A., and S.N. Pakulov (0). Spin-lattice relaxation in excited triplet states of 4,4'-dichlorobenzophenone crystals in strong magnetic fields at 2 K. OiS, v. 53, no. 2, 1982, 367-369.

543. Ballod, L.A., V.A. Balakin, V.P. Biryulin, O.A. Golubev, V.D. Mironov, A.I. Popov, A.V. Pyshnov, V.M. Kolobashkin, G.A. Gabrielyants, and Ye.A. Popov (16). Laser hydrocarbon and carbon dioxide analyzers and their application. Sb 3, 3-17. (RZhRadiot, 8/82, 8Ye489)

544. Belke, S., H. Wabnitz, and B. Wilhelmi (NS). Influence of the polarization state of excitation and probe pulses on their interaction in dye solutions. Sb 29, 290-294. (RZhF, 7/82, 7D1098)

545. Belyy, M.U., S.Ye. Zelenskiy, B.A. Okhrimenko, and S.M. Yablochkov (51). Interaction of Tl^+ centers in potassium borate glass with high-power laser radiation. UFZh, no. 7, 1982, 1002-1006.

546. Bobrovnikova, I.A., V.G. Voyevodin, Yu.G. Katayev, A.N. Morozov, L.G. Nesteryuk, and T.N. Pegova (47). Photoluminescence of epitaxial layers of a $ZnGeP_2$-2GaP solid solution. IVUZ Fiz, no. 7, 1982, 110-112.

547. Bulanin, M.O., Yu.M. Ladvishchenko, and E.B. Khodos (0). Measuring the pressure broadening and shift of the asR(0,0) line of the ν_2 band of $^{15}NH_3$ ammonia. OiS, v. 53, no. 2, 1982, 198-201.

548. Danelyus, R., and R. Rotomskis (49). Measuring the kinetics of changes in absorption for PVC:TNF under picosecond excitation. KE, no. 7, 1982, 1479-1481.

549. Dobryshin, V.Ye., N.A. Karpov, S.A. Kotochigova, B.B. Krynetskiy, V.A. Mishin, O.M. Stel'makh, and V.M. Shustryakov (1). Laser spectroscopy of autoionized levels of the samarium atom. Fizicheskiy institut AN SSSR. Preprint, no. 80, 1982, 28 p. (RZhF, 8/82, 8D421)

550. Fink, F. (NS). Intensity-dependent absorption and fluorescence effects of pseudoisocyanine aggregates. Sb 29, 281-285. (RZhF, 7/82, 7D1103)

551. Gadzhiyev, Z.I. (2). Using Raman spectroscopy to study the molecular organization of the pigment apparatus of photosynthesizing organisms. Moskovskiy GU. Dissertation, 1981, 22 p. (KLDVAD, 7/82, 10330)

552. Gaysin, V.A., and D.S. Nedzvetskiy (0). Exciton-phonon interaction in PbO_T crystals. Sb 30, 98-101. (RZhF, 8/82, 8D831)

553. Gurari, M.L., I.I. Lushchikov, V.M. Tikhonov, and V.A. Frolov (O). Laser correlation spectrometer. Sb 21, 53-55. (RZhF, 7/82, 7D758)

554. Heumann, E. (NS). Investigation of bimolecular interactions by means of picosecond probe beam spectroscopy. Sb 29, 295-299. (RZhF, 7/82, 7D1094)

555. Kachanov, A.A., S.A. Kucherov, V.V. Tkachev, Ye.N. Antonov, and P.S. Antsiferov (O). Automated laser spectrometer. ZhPS, v. 37, no. 2, 1982, 335-337.

556. Kapp, I., W. Triebel, and B. Wilhelmi (NS). Influence of experimental parameters on the accuracy of excitation and probe beam spectra. Sb 15, 169-178. (RZhF, 7/82, 7D1091)

557. Kazakov, V.P., G.L. Sharipov, R.A. Sadykov, and D.D. Afonichev (294). Specific quenching of radioluminescence from UO_2^{2+} ions by radiolysis products in acid solutions. KhVE, no. 4, 1982, 376-377.

558. Kipen', A.A., N.I. Yanushevskiy, and N.I. Vitrikhovskiy (O). Natural resonator: necessary conditions for the presence of the P-band in the radiation spectrum of CdS crystals at high levels of single-photon excitation. Sb 30, 124-129. (RZhF, 8/82, 8D808)

559. Kirillov, S.A., V.I. Maksin, O.Z. Standritchuk, A.I. Agulyanskiy, and L.V. Skrypnik (O). Vibration spectra of sulfamate ions in KSO_3NH_2 and KSO_3ND_2 crystals. ZhNKh, no. 8, 1982, 1921-1925.

560. Kirsanov, A.V., A.I. Popov, and A.V. Sadchikhin (0). Availability of various transitions in He-Ne and He-Xe lasers showing promise for analyzing NO, SO_2 and higher hydrocarbons. Sb 3, 31-38. (RZhRadiot, 8/82, 8Ye501)

561. Klimov, V.I. (2). Picosecond spectroscopy of highly excited direct-band semiconductors. Moskovskiy GU. Dissertation, 1981, 19 p. (KLDVAD, 7/82, 10364)

562. Korotkov, P.A., and G.S. Felinskiy (51). Spectroscopic study on the mechanism of the linear electrooptic effect. Sb 2, 66-81.

563. Kramp, K.D., U. Plauschin, and W. Triebel (NS). Optical multichannel analyzer as a recording instrument in laser spectroscopy. Sb 15, 123-127. (RZhF, 7/82, 7D1089)

564. Kukharskiy, A.A. (0). High-frequency edge of the Raman scattering spectrum for tetragonal barium titanate. OiS, v. 53, no. 1, 1982, 182-184.

565. Mansurov, G.M., N.N. Rozanov, V.M. Zolotarev, and S.M. Sutovskiy (0). Determining the optical characteristics of materials in interior and surface layers from the internal reflection spectrum. OiS, v. 53, no. 2, 1982, 301-306.

566. Manykin, E.A., M.I. Ozhovan, and P.P. Poluektov (16). Coherent echo spectroscopy of small liquid particles. KE, no. 8, 1982, 1619-1624.

567. Mashko, V.V. (0). Determining the coefficients of gain and absorption from the Faraday rotation of the polarization plane. ZhPS, v. 37, no. 2, 1982, 250-256.

568. Mikhaylov, V.P., M.I. Demchuk, and K.V. Yumashev (0). Feasibility of studying conformational changes in protein molecules by fluorescence probing with picosecond time resolution. ZhPS, v. 37, no. 1, 1982, 60-64.

569. Orinchay, A.V., V.B. Lazarev, Ye.Yu. Peresh, B.M. Koperl'os, and V.S. D'ordyay (18,136). Production and properties of some indium, thallium and cesium halide single crystals containing cadmium. NM, no. 8, 1982, 1281-1287.

570. Pikuz, S.A., I.Yu. Skobelev, A.N. Tkachev, and A.Ya. Fayenov (0). Effect of collisional mixing of lower levels in lithium-like ions on the intensity of satellite structures of resonant lines in helium-like ions. OiS, v. 53, no. 2, 1982, 333-336.

571. Przhonskaya, O.V., Ye.A. Tikhonov, F.A. Mikhaylenko, and L.I. Shevchuk (0). Optically induced proton transfer in polymethine dye solutions. ZhPS, v. 37, no. 1, 1982, 54-60.

572. Rebane, L.A., and K.E. Khaller (492). Study on symmetry of the crystalline lattice of proustite using Raman scattering. FTT, no. 8, 1982, 2351-2360.

573. Reznik, L.G., I.M. Rybak, and V.V. Shabalov (0). Using compressed specimens for laser microanalysis. Deposit at VINITI, no. 1491-82, 31 March 1982, 6 p. (DR, 7/82, 354)

574. Russu, S.S., and P.I. Khadzhi (44). Evaluation of three-photon two-exciton absorption of intense laser radiation in semiconductors. UFZh, no. 8, 1982, 1153-1159.

575. Salayev, E.Yu., R.A. Dzhafarova, A.P. Mamedov, and L.Ya. Panova (672). Study on phase transitions in single alkyl-substituted ammonium halides using optical spectroscopy. DAN Az, no. 6, 1982, 24-28.

576. Semenov, A.Ye., and Ye.V. Cherkasov (0). Angular dependence of spontaneous Raman scattering in $LiNbO_3$. OiS, v. 53, no. 1, 1982, 180-182.

577. Surkin, R.I., and L.M. Sverdlov (0). Relative cross-sections of the Raman lines for ethylene and propylene. ZhPS, v. 37, no. 2, 1982, 329-332.

578. Valakh, M.Ya., A.P. Litvinchuk, and N.I. Vitrikhovskiy (6). Interference of single phonon and double phonon states in $Mn_xCd_{1-x}Te$ crystals due to anharmonism. FTT, no. 7, 1982, 2043-2045.

579. Vendrikh, N.F., S.I. Gorbov, and A.S. Pashinkin (119). Thermodynamic functions for diatomic selenium. NM, no. 7, 1982, 1087-1092.

580. Von der Linde, D. (NS). Picosecond spectroscopy. Sb 1, 542-559. (RZhF, 7/82, 7D1087)

581. Zapasskiy, V.S. (0). High-sensitivity polarimetric measuring techniques. ZhPS, v. 37, no. 2, 1982, 181-196.

J. BEAM-TARGET INTERACTION

2. Metal Targets

582. Boyko, V.I., N.A. Kirichenko, and B.S. Luk'yanchuk (1). Heat damage to oxide films during laser heating of metals in air. Fizicheskiy institut AN SSSR. Preprint, no. 31, 1982, 62 p. (RZhF, 7/82, 7Ye1027)

583. Burmistrov, A.V. (0). Effect of semiconducting properties of oxide coatings on the measured reflectivity of metals under radiation heating. ZhPS, v. 37, no. 2, 1982, 305-309.

584. Dan'shchikov, Ye.V., V.A. Dymshakov, F.V. Lebedev, and A.V. Ryazanov (23). Transition from steady-state to pulsed breakdown of gas at target surfaces by laser radiation. KE, no. 8, 1982, 1703-1705.

585. Dekhtyar, I.Ya., and M.M. Nishchenko (0). Internal field in ^{57}Fe nuclei in an inhomogeneous Nb-Fe system formed under laser irradiation. Metallofizika, no. 1, 1982, 29-34. (RZhF, 7/82, 7Ye1047)

586. Foteyev, N.K., V.V. Ploshkin, V.A. Lyakishev, and S.V. Shirokov (0). Cooling rate and microstructure of surface layers in 5KhNM steel processed by electro-erosion. EOM, no. 4, 1982, 11-13.

587. Kyashkin, V.M. (2). Obtaining amorphous metal alloys by laser. Moskovskiy GU. Dissertation, 1981, 14 p. (KLDVAD, 7/82, 10377)

588. Mamin, G.I., M.S. Kovalenko, and A.L. Lyakhovich (0). Monitoring of relief and laser welding by acoustic emission. Sredstva svyazi, no. 1, 1982, 61-63. (RZhF, 8/82, 8Zh694)

589. Posobilov, N.Ye., and N.S. Yakunin (0). Device for trimming the resistance of cylindrical film resistors to the rated value. Otkr izobr, no. 27, 1982, 945911.

590. Reyman, S.I., V.S. Shpinel', and V.P. Gor'kov (0). Nuclear gamma resonance study on laser hardening of metals. Sb 31, 205-211. (RZhRadiot, 7/82, 7Ye378)

591. Serebryakova, S. (440). Lasers at the ZIL automobile factory. Khimiya i zhizn', no. 7, 1982.

592. Smurov, I.Yu. (22). Transient problems of heating and melting of metals by laser radiation and by a plasma. Institut metallurgii AN SSSR. Dissertation, 1981, 20 p. (KLDVAD, 8/82, 12155)

593. Uglov, A.A., V.A. Grebennikov, and V.G. Panayetov (0). Structural change in porous materials under laser action. FiKhOM, no. 4, 1982, 85-87.

2. Dielectric Targets

594. Dyumayev, K.M., A.A. Manenkov, A.P. Maslyukov, G.A. Matyushin, V.S. Nechitaylo, and A.S. Tsaprilov (1). Effect of the viscoelastic properties of the plasticizer type and matrix on the resistance of transparent polymers to laser action. KE, no. 7, 1982, 1318-1321.

595. Ikramov, G.I., I.Kh. Isayev, A.N. Kononov, G.T. Petrovskiy, and D.M. Yudin (7). Effect of thermal radiation processing on the radiation stability of glass. FiKhS, no. 4, 1982, 462-464.

596. Kuklev, Yu.I. (691). Action of CO_2 laser radiation on organosilicon films. Deposit at ONIITEKhIM, no. 445KhP-D82, 19 Apr 1982, 12 p. (DR, 8/82, 309)

597. Radloff, W., E. Below, H. Wagner, and P. Kleinert (NS). Laser absorption measurement of OH ion distribution profiles in silica glasses. PSS, v. A69, no. 1, 1982, K21-K24. (RZhF, 8/82, 8Ye704)

3. Semiconductor Targets

598. Abakumov, V.N., Zh.I. Alferov, Yu.V. Koval'chuk, and Ye.L. Portnoy (0). Thermal model for interference laser annealing. ZhTF P, no. 16, 1982, 966-970.

599. Davydova, N.A., and I.Yu. Shabliy (0). Low-temperature luminescence from free and bound excitons in CdS crystals previously irradiated by laser. Sb 30, 102-107. (RZhF, 8/82, 8D807)

600. Drazhan, A.V., V.A. Zuyev, V.G. Litovchenko, V.P. Sorvina, and D.I. Tetel'baum (6). Study on high-temperature thermal and laser annealing of implanted GaAs. Sb 2, 83-87.

601. Dzhafarov, T.D., and T.V. Tsyganova (60). Photostimulated annealing of radiation defects in silicon and gallium arsenide. DAN Az, no. 7, 1982, 21-23.

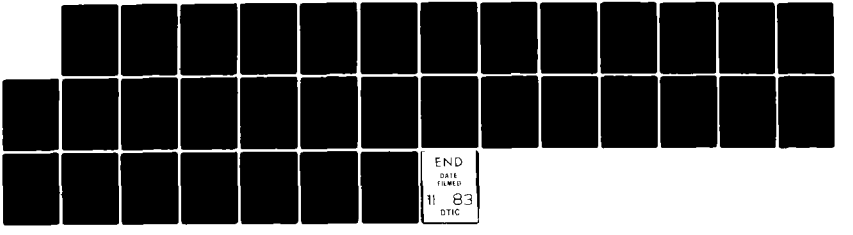
602. Hajto, J., G. Radnoczi, L. Pogany, and E. Hajto (NS). Electron microscope investigation of laser-irradiated amorphous $GeSe_2$ and As_2S_3 thin films. Kozponti fizikai kutato intezet, no. 96, 1981, 23 p. (RZhF, 7/82, 7Ye1030)

603. Kotlyarchuk, B.K., L.G. Mansurov, G.V. Plyatsko, D.I. Popovich, and V.G. Savitskiy (114,511). Laser epitaxy and annealing of thin A_2B_6 compound films. UFZh, no. 7, 1982, 1066-1070.

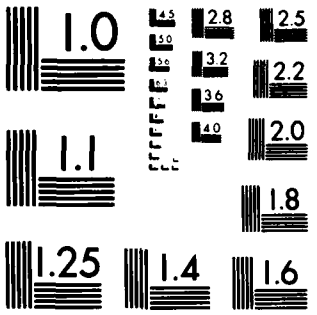
604. Koval'chuk, Yu.V., G.V. Ostrovskaya, V.B. Smirnitskiy, O.V. Smol'skiy, and I.A. Sokolov (4). Intracavity laser annealing of semiconductors. ZhTF P, no. 15, 1982, 917-920.

AD-A133 932 BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS NUMBER 60 JULY - AUGUST 1982(U) DEFENSE INTELLIGENCE AGENCY WASHINGTON DC DIRECTORATE FOR SCI.. 15 JUL 83 2/2

UNCLASSIFIED DIA-DST-2700Z-006-83 F/G 5/2 NL



END
DATE FILMED
11 83
DTIC



605. Manenkov, A.A., G.N. Mikhaylova, A.M. Prokhorov, A.V. Sidorin, S.Yu Sokolov, and S.G. Tikhodeyev (1). Laser heating and vaporization of electron-hole drops in germanium. ZhETF P, v. 36, no. 1, 1982, 7-10.

606. Wielunski, M., J. Auleytner, S. Czarnecki, A. Turos, and D. Wielunska (NS). Influence of nonuniformity of laser beam intensity on the surface layer structure of implanted silicon crystals. Crystal Research and Technology [GDR], no. 2, 1982, 197-203. (RZhF, 7/82, 7Ye1034)

4. Miscellaneous Targets

607. Akhsakhalyan, A.D., Yu.A. Bityurin, S.V. Gaponov, A.A. Gudkov, and V.I. Luchin (426). Processes in an erosion plasma during laser vacuum sputtering of films. Part 1. Characteristics of a laser erosion plasma during inertial dispersion. ZhTF, no. 8, 1982, 1584-1589.

608. Akhsakhalyan, A.D., Yu.A. Bityurin, S.V. Gaponov, A.A. Gudkov, and V.I. Luchin (426). Processes in an erosion plasma during laser vacuum sputtering of films. Part 2. Interaction of laser erosion products with the surface of a solid. ZhTF, no. 8, 1982, 1590-1596.

609. Askar'yan, G.A., and I.M. Rayevskiy (1). Microflare synthetic dielectrics produced by the effect of laser radiation on a sol. ZhETF P, v. 36, no. 4, 1982, 135-138.

610. Bartsch, H., D. Baither, R. Klabes, and B. Laemmel (NS). Recrystallization of amorphous implanted silicon layers under laser annealing. Sb 24, 358-359. (RZhF, 8/82, 8Ye706)

611. Cherednik, V.I., and A.P. Chirimanov (426). Modeling of non-steady-state processes during dispersion and interaction of a laser erosion flare. ZhTF, no. 8, 1982, 1597-1603.

612. Dvorkin, V.I. (184). Using a laser flare from a graphite-containing target for the atomization of matter in atomic absorption analysis. Institut geokhimii i analiticheskoy khimii AN SSSR. Dissertation, 1981, 21 p. (KLDVAD, 8/82, 12207)

613. Gaponov, S.V., V.N. Genkin, A.A. Gudkov, and M.Yu. Myl'nikov (0). Vaporization of nonabsorbing targets by laser radiation. ZhTF, no. 7, 1982, 1351-1355.

614. Gorbunov, A.V. (66). Spatial and size distribution of inhomogeneities induced by optical breakdown of alkali halide crystals at 10.6 μm. ZhTF P, no. 13, 1982, 792-795.

615. Heinig, K.H., and H. Woittennek (NS). Laser-induced diffusion and segregation in ion implanted silicon layers. Sb 32, 80-82. (RZhF, 8/82, 8Ye716)

616. Kovalev, V.I. (1). Study on the breakdown mechanism at the surface of materials for IR optics under the action of pulsed CO_2 laser radiation. Tr 1, 51-117.

617. Luskin, B.M. (94). Study on the properties of superthin films and multilayer periodic structures obtained from a laser plasma. Gor'kovskiy GU. Dissertation, 1981, 22 p. (KLDVAD, 7/82, 10384)

618. Presnyakov, L.P., and A.P. Shevel'ko (1). Intense x-ray radiation from the effect of a laser plasma flare on a solid state surface. ZhETF P, no. 36, 1982, 38-40.

619. Prokhorov, A.M., V.A. Sychugov, A.V. Tishchenko, and A.A. Khakimov (1). Excitation of surface electric waves by high-power laser radiation on the surface of a solid. ZhTF P, no. 16, 1982, 961-966.

620. Sobol', E.N. (682). Characteristics of destruction of dissociating materials under the effect of intense energy fluxes. ZhTF, no. 8, 1982, 1697-1699.

621. V'yunenko, N. (0). Beam weapons in the United States. Morskoy sbornik, no. 8, 1982, 81-85.

622. Wautelet, M. (NS). Jahn-Teller type phase transitions in solids under laser irradiation. PSS, v. B103, no. 2, 1981, 703-707. (RZhF, 8/82, 8Ye701)

K. PLASMA GENERATION AND DIAGNOSTICS

623. Abdullayev, A.Sh. (116). Theory on the interaction of high-power electromagnetic radiation with a plasma. Moskovskiy aviatsionnyy institut. Dissertation, 1981, 12 p. (KLDVAD, 7/82, 10301)

624. Anan'in, O.B., Yu.A. Bykovskiy, V.P. Guseyev, Yu.P. Kozyrev, I.V. Kolesov, A.S. Pasyuk, and V.D. Peklenkov (0). Production of multi-charged ions from a laser plasma in a magnetic field. ZhTF, no. 7, 1982, 1472-1474.

625. Artsimovich, V.L., L.M. Gorbunov, Yu.S. Kas'yanov, and V.V. Korobkin (1). Self-focusing of light in a laser plasma. DAN SSSR, v. 265, no. 4, 1982, 857-858.

626. Barysheva, N.M., A.I. Zuyev, N.G. Karlykhanov, V.A. Lykov, and V.Ye. Chernikov (0). Implicit method for numerical modeling of the physical processes in a laser plasma. ZhVMMF, no. 2, 1982, 401-410. (RZhF, 8/82, 8G253)

627. Basov, N.G., Yu.A. Bykovskiy, A.V. Vinogradov, S.A. Zverev, M.P. Kalashnikov, V.L. Kantsyrev, Yu.P. Kozyrev, M.Yu. Mazur, Yu.A. Mikhaylov, A.V. Rode, and G.V. Sklizkov (1). Evaluating the possibilities of a laser plasma source of x-rays for x-ray lithography. Fizicheskiy institut AN SSSR. Preprint, no. 29, 1982, 10 p. (RZhF, 7/82, 7G206)

628. Basov, N.G., Yu.A. Bykovskiy, A.V. Vinogradov, A.A. Galichiy, M.P. Kalashnikov, V.L. Kantsyrev, Yu.P. Kozyrev, M.Yu. Mazur, Yu.A. Mikhaylov, V.P. Puzyrev, A.V. Rode, G.V. Sklizkov, and I.Ya. Frondzey (1). Study on a laser plasma source of soft x-rays with flux densities of $5 \cdot 10^{11} - 2 \cdot 10^{14}$ W/cm^2. KE, no. 8, 1982, 1525-1529.

629. Bechvarzh, F., P. Zeman, M. Kralik, et al (52). Search for radiative capture of neutrons by nuclei, stimulated by the electric field of a laser wave. Ob"yedinennyy institut yadernykh issledovaniy. Preprint, no. R3-82-224, 1982, 6 p. (KL, 35/82, 31802)

630. Bedilov, M.R., P.K. Khabibullayev, M.S. Sabitov, and R. Abdupatayev (0). Energy spectrum of hydrogen during the formation of multicharged ions in a laser plasma. IAN Uz, no. 1, 1982, 74-76. (RZhF, 8/82, 8G360)

631. Bergel'son, V.I., and I.V. Nemchinov (0). Analyzing the interaction of laser radiation with an obstruction in a vacuum, allowing in detail for the spectral composition of the radiation emitted by the developing plasma. Sb 11, 102-109. (RZhF, 7/82, 7G281)

632. Bokov, N.N., A.A. Bunatyan, V.A. Lykov, V.Ye. Neuvazhayev, L.P. Strotseva, and V.D. Frolov (0). Feasibility of decreasing the sensitivity of microscopic targets to nonsymmetry of laser irradiation. ZhPMTF, no. 4, 1982, 20-21.

633. *Boyko*, V.A., B.A. Bryunetkin, F.V. Bunkin, V.I. Derzhiyev, V.M. Dyakin, I.Yu. Skobelev, A.Ya. Fayenov, A.I. Fedosimov, K.A. Shilov, and S.I. Yakovlenko (1). Radiation from a laser plasma flowing around obstructions. Fizicheskiy institut AN SSSR. Preprint, no. 237, 1982, 18 p.

634. Bufetov, I.A., A.M. Prokhorov, V.B. Fedorov, and V.K. Fomin (1). Motion of inhomogeneities in a gas flow before an optical discharge front and slow combustion of a laser plasma totally submerged in a laser beam. Fizicheskiy institut AN SSSR. Preprint, no. 199, 1982, 19 p.

635. Burtsev, V.A., and Yu.I. Sholokhov (247). Absorption of laser radiation in the UTRO-M experimental plasma device. NII elektrofizicheskoy apparatury. Preprint, no. P-K-0538, 1981, 15 p. (RZhF, 8/82, 8D1373)

636. Danilychev, V.A., V.D. Zvorykin, I.V. Kholin, and A.Yu. Chugunov (0). Experimental study on radiation from a plasma formed from the interaction of high-power CO_2 laser pulses with targets in air. Sb 11, 73-84. (RZhF, 8/82, 8G48)

637. Ecknaus, W., A. Harten, and Z. Peradzynski (NS). Stability of a laser beam maintained plasma. BAPS, no. 9-10, 1980, 483-488. (RZhF, 8/82, 8G278)

638. Filippova, T.I. (0). Second International Working Conference on Plasma Focus and Associated Phenomena, Brussels, September 1981. Atomnaya energiya, v. 52, no. 4, 1982, 284-285.

639. Gurov, V.S. (0). Energy distribution of ions extractable from a laser plasma. Sb 4, 57-60. (RZhRadiot, 7/82, 7Ye419)

640. Gus'kov, S.Yu., and Yu.A. Mikhaylov (1). Collection of annotations of scientific articles and reports from the Laboratory of Laser Plasma for 1980. Fizicheskiy institut AN SSSR. Preprint, no. 38, 1982, 25 p. (RZhF, 8/82, 8G261)

641. Isbasescu, M. (NS). Laser with a plasma mirror. SCF, no. 3, 1982, 287-299. (RZhF, 8/82, 8G273)

642. Kamrukov, A.S., N.P. Kozlov, S.G. Kuznetsov, and Yu.S. Protasov (24). Bright UV source based on a cumulative plasma discharge. KE, no. 7, 1982, 1429-1437.

643. Korukhov, V.V., N.G. Nikulin, and B.I. Troshin (159). Observation of population inversion at OVIII levels in a laser plasma. KE, no. 8, 1982, 1711-1713.

644. Kozlov, I.M., G.S. Romanov, and A.V. Teterev (87). Effect of condensed phase particles on the parameters of photoerosional flares. Deposit at VINITI, no. 1972-82, 22 April 1982, 19 p. (RZhF, 8/82, 8G363)

645. Kuznetsov, E.I. (0). Tenth European Conference on Controlled Fusion and Plasma Physics. Atomnaya energiya, v. 52, no. 3, 1982, 211-213. (RZhF, 7/82, 7G1)

646. Loseva, T.V., and I.V. Nemchinov (276). Subsonic radiation waves. Comparison of theory and experiment. KE, no. 7, 1982, 1373-1378.

647. Lukin, V.A., B.A. Nechayev, and A.V. Peshkov (0). Pulsed plasma source. Deposit at VINITI, no. 1388-82, 29 March 1982, 11 p. (RZhF, 7/82, 7G356)

648. Nikolayev, F.A., G.V. Sklizkov, V.V. Sorokin, and O.I. Stukov (1). Possibility of measuring fast electron spectra and gamma quanta from a thermonuclear laser plasma by means of Cerenkov counters. Fizicheskiy institut AN SSSR. Preprint, no. 223, 1982, 29 p.

649. Okunev, V.Ye., and G.S. Romanov (0). Analyzing the radiation gasdynamic processes occurring in a capillary discharge with an evaporating wall. Sb 11, 48-61. (RZhF, 7/82, 7G272)

650. Ragozin, Ye.N. (1). Effect of radiation losses on the hydrodynamics of a laser plasma corona. KE, no. 7, 1982, 1346-1355.

651. Romanov, G.S., and V.V. Urban (0). Analyzing the parameters of a pulsed light source based on an explosive plasma generator. Sb 33, 12-20. (RZhF, 7/82, 7G348).

652. Romanov, G.S., and Yu.A. Stankevich (87). Forming of a photoerosional flare during peak action at an obstruction. Deposit at VINITI, no. 1973-82, 22 April 1982, 16 p. (RZhF, 8/82, 8G362)

653. Rybakov, V.A. (0). Experimental study on the propagation of a two-dimensional plasma layer, preheated by laser radiation, in high-density helium. Sb 11, 85-89. (RZhF, 8/82, 8G358)

654. Sholin, G.V. (0). 15th International Conference on Phenomena in Ionized Gases, Minsk, 1981. Atomnaya energiya, v. 52, no. 4, 1982, 276-277. (RZhF, 8/82, 8G7)

655. Soviet-American Coordinating Commission on Thermonuclear Energy. Seventh Session, Moscow, 2-5 Dec 1981. Atomnaya energiya, v. 52, no. 4, 1982, 251-282. (RZhF, 8/82, 8G1)

656. Vas'kovskiy, Yu.M., I.A. Gordeyeva, R.Ye. Rovinskiy, and I.P. Shirokova (0). Experimental study on the dynamics of plasma development near an obstruction under the action of 10.6 μm laser radiation. Sb 11, 69-72. (RZhF, 7/82, 7G115)

657. Yeliseyev, G.A., and Ye.M. Petrov (0). Cooperation of the USSR with member nations of COMECON in research on controlled thermonuclear fusion. Atomnaya energiya, v. 52, no. 4, 1982, 279-281. (RZhF, 8/82, 8G2)

658. Yel'yasheviya, M.A., G.S. Romanov, and Yu.A. Stankevich (0). Calculating the parameters of photoerosional plasma flares, allowing for the spectral dependence of their radiation characteristics. Sb 11, 90-101. (RZhF, 8/82, 8G361)

659. Zozulya, A.A., and V.P. Silin (1). Raman scattering in a laser plasma. Fizika plazmy, no. 4, 1982, 859-871.

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

660. Baranov, V.Yu., A.S. Kovalev, I.G. Persiantsev, et al (0). Fizika molekulyarnykh gazovykh lazerov i ikh primeneniye (Physics of molecular gas lasers and their application). Edited by Ye.P. Velikhov (0). Seriya "Tekhnologiya". Uspekhi sovremennoy nauki i tekhniki (Technology series. Advances in modern science and technology). Moskva, Mir, 1981, 266 p. (KL, 31/82, 28123)

661. Belotserkovskiy, O.M., and Yu.M. Davydov (0). Metod krupnykh chastits v gazovoy dinamike. Vychislitel'nyy eksperiment (Coarse particle method in gasdynamics. Computer experiment). Moskva, Nauka, 1982, 392 p.

662. Burshteyn, A.I., and S.I. Temkin (0). Spektroskopiya molekulyarnogo vrashcheniya v gazakh i zhidkostyakh (Spectroscopy of molecular rotation in gases and liquids). Novosibirsk, Nauka, 1982, 119 p. (RZhF, 8/82, 8D481)

663. Dvurechenskiy, A.V., G.A. Kachurin, Ye.V. Nidayev, and L.S. Smirnov (10). Impul'snyy otzhig poluprovodnikovykh materialov (Pulsed annealing of semiconductor materials). Edited by A.V. Rzhanov (10). Institut fiziki poluprovodnikov SOAN. Moskva, Nauka, 1982, 208 p.

664. Gorbachev, V.V., and L.G. Spitsyna (0). Fizika poluprovodnikov i metallov (Physics of semiconductors and metals). 2nd edition revised and enlarged. Moskva, Metallurgiya, 1982, 336 p.

665. Infrakrasnyye lazery s kogerentnoy nakachkoy i luchevaya stoykost' opticheskikh materialov (Coherently pumped infrared lasers and radiation resistance of optical materials). Fizicheskiy institut AN SSSR. Trudy, no. 136. This issue edited by N.G. Basov (1). 1982, 169 p.

666. Inzhektsionnaya gazovaya elektronika (Gas injection electronics). Edited by O.B. Yevdokimov (466). Authors listed on inside page: Yu.I. Bychkov, Yu.D. Korolev, G.A. Mesyats, V.V. Osipov, V.V. Ryzhov, and V.F. Tarasenko (466). Institut sil'notochnoy elektroniki SOAN. Novosibirsk, Nauka, 1982, 240 p.

667. Kinetika neravnovesnykh elektronnykh i elektronkolebatel'nykh sistem (Kinetics of nonequilibrium electron and electrovibrational systems). Edited by V.A. Kovarskiy (0). Kishinev, Shtiintsa, 1982, 138 p. (RZhF, 8/82, 8D480)

668. Kolesnikov, P.M. (180). Teoriya neodnorodnykh svetovodov i rezonatorov (Theory of inhomogeneous lightguides and resonators). Edited by R.I. Soloukhin (180). Institut teplo- i massoobmena AN BSSR. Minsk, Nauka i tekhnika, 1982, 296 p.

669. Lazernyy absorbtsionnyy analiz i yego prilozheniye v geologii, geofizike i ekologii (Laser absorption analysis and its application geology, geophysics and ecology). Edited by A.I. Popov (16). Moskovskiy inzhenerno-fizicheskiy institut. Moskva, Energoizdat, 1982, 59 p. (KL, 28/82, 25133)

670. Opticheskiye metody kontrolya integral'nykh mikroskhem. Sostoyaniye i perspektivy sovershenstvovaniya (Optical methods for monitoring integrated microcircuits. Current status and prospects for further development). Authors listed on inside page: Yu.S. Vartanyan, N.S. Rozin'kov, L.G. Dubitskiy, Ye.V. Poddubnyy, and D.I. Zaks (0). Edited by L.G. Dubitskiy (0). Series: Massovaya biblioteka inzhenera "Elektronika:, no. 32. Moskva, Radiot i svyaz, 1982, 136 p.

671. Optika neodnorodnykh sred (Optics of inhomogeneous media). Petrozavodskiy GU. Mezhvuzovskiy sbornik. Edited by A.D. Khakhayev (647). 1981, 147 p. (RZhF, 8/82, 8D305)

672. Optiko-elektronnyye pribory i sistemy (Optoelectronic instruments and systems). Leningradskiy elektrotekhnicheskiy institut (110). Izvestiya, no. 290, 82 p. (RZhF, 7/82, 7D719)

673. Peredacha informatsii v energosistemakh. XXVIII Mezhdunarodnaya konferentsiya po bol'shim elektricheskim sistemam, SIGRE-80. Perevody dokladov (Information transmission in power systems. 28th International Conference on Large Electric Systems, CIGRE-80 [Conference Internationale des Grands Reseaux Electriques]. Translations of the reports). Edited by G.V. Mikutskiy (0). Moskva, Energoizdat, 1982, 86 p. (RZhRadiot, 7/82, 7Ye274)

674. Petrov, B.N., I.I. Gol'denblat, G.M. Ulanov, and S.V. Ul'yanov (285). Problemy upravleniya relyativistskimi i kvantovymi dinamicheskimi sistemami. Fizicheskiye i informatsionnyye aspekty (Problems of the control of relativistic and dynamic systems. Physical and informational aspects). Edited by O.M. Belotserkovskiy (285). Institut problem upravleniya AN SSSR. Moskva, Nauka, 1982, 527 p.

675. Popescu, I.I., I. Jova, and E. Toader (NS). Fizica plasmei si aplicatii (Plasma physics and its application). Bucuresti, Stiinta si enciclopedia, 1981, 516 p. (RZhF, 7/82, 7G5)

676. Pribory dlya nauchnykh issledovaniy i avtomatizatsii eksperimenta (Instruments for scientific research and automation of experiments). Edited by V.A. Pavlenko (0). Leningrad, Nauka, 1982, 196 p.

677. Prikladnaya fizicheskaya optika (Applied physical optics). Moskovskiy energiticheskiy institut. Trudy, no. 567. Edited by V.A. Fabrikant (19). Moskva, 1982, 91 p.

678. Pushcharovskiy, D.Yu. (2). Sturktura i svoystva kristallov (Structure and properties of crystals). Moskovskiy GU. Moskva, 1982, 106 p. (RZhF, 8/82, 8A23)

679. Rebane, K.S.K (131). Mazery i lazery (Masers and lasers). Tartuskiy GU. Tartu, 1981, 83 p. (KL, 32/82, 29140)

680. Stekloobraznyy sul'fid mysh'yaka i yego splavy. Fizicheskiye svoystva i primeneniye (Glassy arsenic sulfide and its alloys. Physical properties and applications). Edited by B.T. Kolomiyets (44). Authors listed on inside page: A.M. Andriyesh, M.S. Iovu, D.I. Tsiulyanu, and S.D. Shutov (44). Institut prikladnoy fiziki AN MSSR. Kishinev, Shtiintsa, 1981, 212 p.

681. Striganov, A.R., and G.A. Odintsova (0). Tablitsy spektral'nykh liniy atomov i ionov. Spravochnik (Tables of atomic and ion spectral lines. Handbook). Moskva, Energoizdat, 1982, 312 p. (RZhF, 7/82, 7ç312)

682. Troitskiy, I.N. (118). Kogerentnaya optika i golografiya (Coherent optics and holography). Moskovskiy fiziko-tekhnicheskiy institut. Moskva, 1982, 88 p. (KL, 31/82, 28016)

683. IV Vsesoyuznyy simpozium po sil'notochnoy elektronike. Tezisy dokladov (Fourth All-Union Symposium on High-Current Electronics. Summaries of the reports). Part 2. Institut sil'notochnoy elektroniki SOAN (466). Tomsk, 1982, 278 p. (RZhF, 8/82, 8G5)

684. Zhokhov, V.P., A.A. Komarova, L.I. Maksimova, V.R. Muratov, Yu.P. Pal'tsev, and A.I. Semenov (0). Gigiyena truda i profilaktika professional'noy patologii pri rabote s lazerami (Labor hygiene and protection against occupational pathology while working with lasers). Moskva, Meditsina, 1981, 208 p. (Reviewed in Gigiyena truda i professional'nyye zabolevaniya, no. 8, 1982, 58-59).

685. Zubov, V.A. (19). Uchebnoye posobiye po kursu "Osnovy golografii". Osnovy opticheskoy obrabotki informatsii (Textbook for the course "Fundamentals of Holography". Fundamentals of optical information processing). Edited by G.M. Yanina (19). Moskovskiy energeticheskiy institut. Moskva, 1981, 72 p. (KL, 30/82, 27229)

686. Zyubrik, A.I. (114). Materialy dlya opticheskoy zapisi informatsii (Materials for optical information recording). L'vovskiy GU, 1982, 135 p. (RZhRadiot, 8/82, 8Ye470)

IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APH	(APAHA)	Acta physica et Academiae scientiarum hungaricae
BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BAPS Phys	(-----)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Physiques et Astrologiques
DAN Az	(DAZRA)	Akademiya nauk Azerbaydzhanskoy SSR. Doklady
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DR	(DERUB)	Deponirovannyye rukopisi
EOM	(EOBMA)	Elektronnaya obrabotka materialov
ETP	(EXPPA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotki materialov
FiKhS	(FKSTD)	Fizika i khimiya stekla
FTP	(FTPPA)	Fizika i tekhnika poluprovidnikov
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
IT	(IZTEA)	Izmeritel'naya tekhnika

I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IVUZ Fiz	(IVUVA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
JMO	(JMKOA)	Jemna mechanika a optika
JS	(-----)	Journal Signalaufzeichnungsmaterialen
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 fizike
MZhiG	(IMZGA)	Akademiya nauk SSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	(IVNMA)	Akademiya nauk SSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
Poverkh	(-----)	Poverkhnost'. Fizika, khimiya, mekhanika
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research (B). Basic Research
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika

RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	sbornik	Defects in insulating crystals. International Conference, Riga, 18-23 May 1981. Proceedings. Riga, Berlin, publishing house not given, 1981.
Sb2		Kvantovaya elektronika, no. 22, Kiyev, Naukova dumka, 1982.
Sb3		Lazernyy absorbtsionyy analiz i yego prilozheniye v geologii, geofiziki i ekologii. Moskovskiy inzhenerno fizicheskiy institut. Moskva. Energoizdat, 1982.
Sb4		Vakuumnaya i gazorazryadnaya elektronika, Ryazan', 1981.
Sb5		Inzhektsionnaya gazovaya elektronika. Institut sil'notochnoy elektroniki SOAN. Novosibirsk, Nauka, 1982.
Sb6		Mekhaniki neodnorodnykh sred. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Sbornik nauchnykh trudov. Novosibirsk, Nauka, 1982.
Sb7		Kinetika neravnovesnykh elektronnykh i elektronkolebatel'nykh sistem. Kishinev, Shtiintsa, 1982.
Sb8		Pribory dlya nauchnykh issledovaniy i avtomatizatsii eksperimenta. Nauchno-tekhnicheskoye ob"yedineniye AN SSSR. Leningrad, Nauka, 1982.
Sb9		Chislennyye metody mekhaniki sploshnoy sredy, no. 5, Novosibirsk, 1981.
Sb10		Nauchnaya konferentsiya Moskovskogo fiziko-tekhnicheskogo instituta. 27th. Moskva, Nov 1981. Trudy. Deposit at VINITI, no. 1502-82, 1 Apr 1982.
Sb11		Vsesoyuznaya konferentsiya "Dinamika izluchayushchego gaza". 4th. Moskva, 31 Mar - 2 Apr 1980. Trudy, Vol. 1. Moskva, 1981.
Sb12		Poluprovodnyye soyedineniya. Moskva, 1981.
Sb13		Fizika dielektrikov i poluprovodnikov. Volgograd, 1981.
Sb14		Tekhnicheskiye sredstva sistem upravleniya i voprosy ikh nadezhnosti. Moskva, 1982.
Sb15		Second International Symposium: Ultrafast Phenomena Spektroskopy, Reinhardsbrunn, 30 Oct - 5 Nov 1980 (UPS-80), Proceedings. Vol. 1, Jena, year of publication not given.

Sb16 Wissenschaftliche Zeitschrift Pädagogischen Hochschule Karl Liebknecht. Potsdam, no. 5, 1981.

Sb17 Optika meodnorodnykh sred. Petrozavodskiy GU. Mezhvuzovskiy sbornik. 1981.

Sb18 Funktsional'nyye mikroelektronnyye ustroystva i ikh elementy, no. 6, Taganrog, 1981. Deposit at VINITI, no. 1224-82, 18 Mar 1982.

Sb19 Primeneniye ortogonal'nykh metodov pri obrabotke signalov i analize sistem. Sverdlovsk, 1981.

Sb20 Fazovyye i chastotnyye radiotekhnicheskiye sistemy i ustroystva s tsifrovoy obrabotkoy. Krasnoyarsk, 1981.

Sb21 Fazovyye i polyarizatsionnyye izmereniya lazernogo izlucheniya i ikh metrologicheskoye obespecheniye. VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Nauchnyye trudy. Moskva, 1981.

Sb22 Poluprovodnikovaya elektronika v tekhnike svyazi, no. 22, Moskva. Radio i svyaz', 1982.

Sb23 Pribory dlya nauchnykh issledovaniy i avtomatizatsii eksperimenta. Leningrad, Nauka, 1982.

Sb24 Veröffentlichungen zur 10 Tagung: Elektronenmikroskopie, Leipzig, 19-21 Jan 1981. Vol. 2. East Berlin, year of publication not given.

Sb25 Acta Universitatis Palackianae Olomucensis. Facultas rerum naturalium. Physica, v. 69, no. 20, 1981.

Sb26 Izmereniya, kontrol', avtomatizatsiya, no. 1/41, 1982.

Sb27 Protsessy perenosa v vysokotemperaturnykh i khimicheski reagiruyushchikh potokakh. Institut teplofiziki SOAN. Sbornik nauchnykh trudov. Novosibirsk, 1982.

Sb28 Fizicheskiye metody issledovaniya biologicheskikh ob"yektov, Moskva, 1981.

Sb29 Second International Symposium: Ultrafast Phenomena Spectroscopy, Reinhardsbrunn, 30 Oct - 5 Nov 1980. Proceedings. Vol. 2, Jena, year of publication not given.

Sb30 Vsesoyuznyy seminar "Eksitony v kristallakh. 15th. Chernovtsy, 11-16 May 1981. Trudy, part 1. Deposit at VINITI, no. 2561-82, 24 May 1982.

Sb31		Prikladnaya yadernaya spektroskopiya, no. 11, Moskva, 1982.
Sb32		Zentralinstitut fur Kernforshchung Rossendorf bei Dresden, no. 443, 1981.
SCF	(SCEFA)	Studii si cercetari de fizica
TKiT	(TKTEA)	Tekhnika kino i televideniya
Tr1	trudy	Fizicheskiy institut AN SSSR. Trudy, no. 136, 1982.
Tr2		Moskovskiy energeticheskiy institut. Trudy, no. 571, 1982.
Tr3		Moskovskiy energeticheskiy institut. Trudy, no. 567, 1982.
Tr4		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 290, 1981.
Tr5		Glavnaya geofizicheskaya observatoriya. Trudy, no. 450, 1982.
TVT	(TVYTA)	Teplofizika vysokikh temperatur
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZETFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZEPRA)	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 neorganichskoy 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, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut im Ioffe AN SSSR).
5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR).
6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR).
7. State Optical Institute im Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im Vavilova).
10. Institute of Semiconductor Physics, Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN SSSR).
12. Leningrad State University (Leningradskiy GU).
13. Institute of Crystallography, AN SSSR, Moscow (Institut kristallografii AN SSSR).
15. Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR).
16. Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut).
17. Institute of Problems of Mechanics, AN SSSR, Moscow (Institut problem mekhaniki AN SSSR).
18. Institute of General and Inorganic Chemistry im Kurnakov, AN SSSR, Moscow (Institut obshchey i neorganicheskoy khimii im Kurnakova AN SSSR).
19. Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut).
22. Institute of metallurgy im Baykov, Moscow (Institut metallurgii im Baykova).
23. Institute of Atomic Energy im Kurchatov, Moscow (Institut atomnoy energii im Kurchatova).
24. Moscow Higher Technical College im Bauman (Moskovskoye vyssheye tekhnicheskoye uchilishche im Baumana).
29. Leningrad Polytechnic Institute (Leningradskiy politekhnicheskiy institut).
30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki).
34. Khar'kov State University (Khar'kovskiy GU).
36. Physicotechnical Institute of Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR).
37. Yerevan State University (Yerevanskiy GU).
40. Tbilisi State University (Tbilisskiy GU).
44. Institute of Applied Physics, AN MSSR, Kishinev (Institut prikladnoy fiziki AN MSSR).
47. Siberian Physicotechnical Institute im Kuznetsov, Tomsk (Sibirskiy fiziko-tekhnicheskiy institut im Kuznetsova).
49. Vilnius State University (Vil'nyusskiy GU).
51. Kiev State University (Kiyevskiy GU).
52. Joint Institute of Nuclear Research, Dubna (Ob"yedinennyy institut yadernykh issledovaniy).

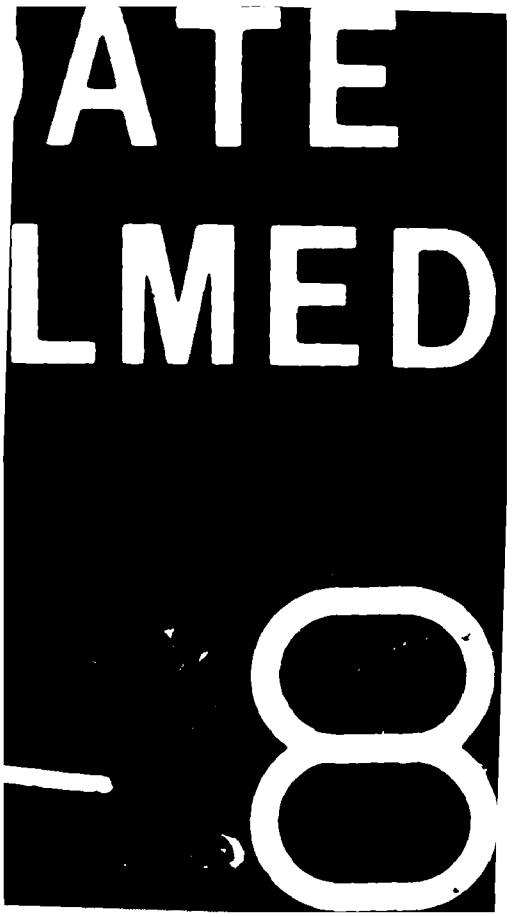
53. Chernovtsy State University (Chernovitskiy GU).
59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issledovaniy AN ArmSSR).
60. Institute of Physics, AN AzSSR (Institut fiziki AN AzSSR).
64. Institute of Atmospheric Physics, AN SSSR (Institut fiziki atmosfery AN SSSR).
66. Institute of Solid State Physics, AN SSSR (Institut fiziki tverdogo tela AN SSSR).
67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR).
69. Institute of Oceanography, AN SSSR (Institut okeanologii AN SSSR).
71. Institute of Applied Mathematics, AN SSSR (Institut prikladnoy matematiki AN SSSR).
72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii AN SSSR).
73. Institute of Theoretical Physics im Landau, AN SSSR (Institut teoreticheskoy fiziki im Landau AN SSSR).
74. Institute of High Temperatures, AN SSSR (Institut vysokikh temperatur AN SSSR).
75. Institute of Automation and Electronic Measurements, Siberian Branch, AN SSSR (Institut avtomatiki i elektrometrii SOAN).
78. Institute of Atmospheric Optics, Siberian Branch, AN SSSR (Institut optiki atmosfery SOAN).
84. Institute of Radiophysics and Electronics, AN UkrSSR (Institut radiofiziki i elektroniki AN UkrSSR).
85. Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR).
86. Azerbaydzhan State University (Azerbaydzhanskiy GU).
87. Belorussian State University (Belorusskiy GU).
90. Electrotechnical Institute of Communications (Elektrotekhnicheskiy institut svyazi).
94. Gor'kiy State University (Gor'kovskiy GU).
96. All Union State Scientific Research and Planning Institute of the Photographic Chemical Industry (Vses gos NI i proyektnyy institut khimiko-fotograficheskoy promyshlennosti).
98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom GU).
106. Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut).
110. Leningrad Electrotechnical Institute (Leningradskiy elektrotekhnicheskiy institut).
114. L'vov State University (L'vovskiy GU).
116. Moscow Aviation Institute (Moskovskiy aviatsionnyy institut).
118. Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut).
119. Moscow Institute of Electronic Engineering (Moskovskiy institut elektronnoy tekhniki).
122. Scientific Research Institute of Physicochemistry im Karpov (NI fiziko-khimicheskiy institut im Karpova).
131. Tartu State University (Tartusskiy GU).
132. Tomsk State University (Tomskiy GU).
136. Uzhgorod State University (Uzhgorodskiy GU).
137. Voronezh State University (Voronezhskiy GU).
141. All Union Scientific Research Institute of Optophysical Measurements (VNII optiko-fizicheskikh izmereniy).
150. Dnepropetrovsk State University (Dnepropetrovskiy GU).
159. Institute of Thermophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut teplofiziki SOAN).

161. Moscow Institute of Radio Engineering, Electronics and Automation Moskovskiy institut radiotekhniki, elektroniki i avtomatiki).
180. Institute of Heat and Mass Exchange, AN BSSR (Institut teplo- i massoobmena AN BSSR).
184. Institute of Geochemistry and Analytical Chemistry im Vernadskiy, AN SSSR, Moscow (Institut geokhimii i analiticheskoy khimii im Vernadskogo AN SSSR).
188. All Union Scientific Research Institute of Single Crystals, Scintillation Materials and Extra Pure Chemical Substances, Khar'kov (VNII monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv).
193. Institute of Theoretical and Applied Mechanics, Siberian Branch, AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mekhaniki SOAN).
197. Tomsk Polytechnic Institute (Tomskiy politekhnicheskiy institut).
199. Moscow Institute of Electronic Machinery (Moskovskiy institut elektronnogo mashinostroyeniya).
201. Institute for Problems of Information Transmission, AN SSSR, Moscow (Institut problem peredachi informatsii AN SSSR).
207. Main Geophysical Observatory (Glavnaya geofizicheskaya observatoriya).
210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).
212. Kuban' State University (Kubanskiy GU).
220. Institute of Experimental Meteorology (Institut eksperimental'noy meteorologii).
231. Scientific Research Institute of Motion Pictures and Photography (NI kinofotoinstitut).
247. Scientific Research Institute of Electrophysical Equipment im Yefremov, Leningrad (NII elektrofizicheskoy apparatury im Yefremova).
248. Institute of Mechanics at Moscow State University (Institut mekhaniki pri Moskovskom GU).
252. Leningrad Institute of Nuclear Physics, AN SSSR (Leningradskiy institut yadernoy fiziki AN SSSR).
254. Moscow Civil Engineering Institute (Moskovskiy inzhenerno-stroitel'skiy institut).
276. Institute of Physics of the Eargh im Shmidt, AN SSSR (Institut fiziki Zemli im Shmidta AN SSSR).
277. Leningrad Institute of Aviation Instruments (Leningradskiy institut aviatsionnogo priborostroyeniya).
282. Scientific ResearchInstitute of Physics, Odessa (NII fiziki, Odessa).
285. Institute of Problems of Control (Institut problem upravleniya).
290. All Union Scientific Research Institute of Medical Instrument Manufacture (VNII meditsinskogo priborostroyeniya).
294. Institute of Chemistry, Bashkir Branch, AN SSSR (Institut khimii Bashkirskogo filiala AN SSSR).
295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimicheskoy kinetiki i goreniya SOAN).
297. Institute of Chemistry, AN SSSR, Gor'kiy (Institut khimii AN SSSR).
299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
321. Mogilev Branch of the Institute of Physics, AN BSSR (Mogilevskiy filial Instituta fiziki AN BSSR).
334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladny-h fizicheskikh problem pri Belorruskom GU).
335. Institute of Electrochemistry, AN SSSR (Institut elektrokhimi AN SSSR).
336. Scientific Research Institute of Nuclear Physics, Electronics and Automation at Tomsk Polytechnic Institute (NII yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskom institute).

337. Computer Center, AN SSSR, Moscow (Vychislitel'nyy tsentr AN SSSR).
348. Volgograd State Pedagogical Institute (Volgogradskiy gos pedagogicheskiy institut).
354. Moscow Medical Stomatological Institute (Moskovskiy meditsinskiy stomatologicheskiy institut).
379. Gomel' State University (Gomel'skiy GU).
405. Institute of Hydromechanics, AN UkrSSR (Institut gidromekhaniki AN UkrSSR).
417. All Union Scientific Research Institute of Eye Diseases (VNII glaznykh bolezney).
426. Institute of Applied Physics, AN SSSR, Gor'kiy (Institut prikladnoy fiziki AN SSSR).
429. Scientific Research Institute of Labor Hygiene and Occupational Diseases, AMN SSSR, Moscow (NII gigiyeny truda i profzabolevaniy AMN SSSR).
435. Simferopol State University (Simferopol'skiy GU).
439. Pure Metals Plant, Svetlovodsk (Zavod chistykh metallov).
440. Moscow Automobile Plant im Likhachev (Moskovskiy avtomobil'nyy zavod im Likhacheva).
444. Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki AN KazSSR).
466. Institute of High-Current Electronics, Siberian Branch, AN SSSR, Tomsk (Institut sil'notochnoy elektroniki SOAN).
473. Institute of Genetics and Cytology, AN BSSR (Institut genetiki i tsitologii AN BSSR).
485. Institute of Nuclear Research, AN SSSR, Moscow (Institut yadernykh issledovaniy AN SSSR).
492. Institute of Physics, AN EstSSR (Institut fiziki AN EstSSR).
506. Institute of Physics, AN LitSSR (Institut fiziki AN LitSSR).
511. Institute of Applied Problems in Mechanics and Mathematics, AN UkrSSR, L'vov (Institut prikladnykh problem mekhaniki i matematiki AN UkrSSR).
512. Institute of General and Inorganic Chemistry, AN UkrSSR, Kiyev (Institut obshchey i neorganicheskoy khimii AN UkrSSR).
517. Leningrad Medical Institute of Public Health (Leningradskiy sanitarno-gigiyenicheskiy meditsinskiy institut).
535. Kemerov State University (Kemerovskiy GU).
565. Institute of Theoretical and Experimental Physics, Moscow (Institut teoreticheskoy i eksperimental'noy fiziki).
571. Kiev Branch of the Odessa Electrotechnical Institute of Communications (Kiyevskiy filial Odesskogo elektrotekhnicheskogo instituta svyazi).
585. Scientific Research Institute of Solid State Physics of the Latvian State University (NII fiziki tverdogo tela Latviyskogo GU).
587. Vitebsk Branch of the Institute of Solid State and Semiconductor Physics, AN BSSR (Vitebskoye otdeleniye Instituta fiziki tverdogo tela i poluprovodnikov AN BSSR).
597. Odessa Scientific Research Institute of Health Resort Treatment (Odesskiy NII Kurortologii).
598. Kuybyshev State University (Kuybyshevskiy GU).
626. All Union Scientific Research Center for Studying the Properties of Surfaces and Vacuums, Moscow (VNI tsentr po izucheniya svoystv poverkhnosti i vakuuma).
637. Kiyev Institute for Advanced Training of Doctors (Kiyevskiy institut usovershenstvovaniya vrachey).
640. Moscow Clinical Infirmary (Moskovskaya klinicheskaya bol'nitsa).

641. Moscow Scientific Research Institute of Ears, Nose and Throat, Ministry of Health RSFSR (Moskovskiy NII ukha, nosa i gorla Minzdrava RSFSR).
647. Petrozavodsk State University (Petrozavodskiy GU).
658. Institute of General Pathology and Pathological Physiology, AMN SSSR, Moscow (Institut obshchey patologii i patologicheskoy fiziologii AMN SSSR).
660. All Union Scientific Research Institute of the Glass Technology Industry (VNII tekhstroystekla).
671. All Union Scientific Center of Surgery, AMN SSSR, Moscow (Vses nauchnyy tsentr khirurgii AMN SSSR).
672. Institute of New Chemical Problems, AN SSSR (Institut novykh khimicheskikh problem AN SSSR).
682. All Union Scientific Research and Planning Surveying Institute on Mining, Transport and Processing of Raw Materials in the Construction Industry (VNI i proyektno-izyskatel'skiy institut po problemam dobychi, transporta i pererabotki mineral'nogo syr'ya v promyshlennosti stroitel'nykh materialov).
690. Leningrad Branch of the Institute of Oceanography, AN SSSR (Leningradskoye otdeleniye Instituta okeanologii AN SSSR).
691. Scientific Research Institute of the Chemistry and Technology of Organoelemental Compounds, Moscow (NII khimii i tekhnologii elementoorganicheskikh soyedineniy).
692. Leningrad Neurosurgical Scientific Research Institute (Leningradskiy NI neyrokhirurgicheskiy institut).
693. Institute of Mathematics, AN BSSR (Institut matematiki AN BSSR).
694. Moscow Institute of Civil Aviation Engineers (Moskovskiy institut inzhenerov grazhdanskoy aviatsii).
695. Kuybyshev "Maslennikov Factory" Industrial Union (Kuybyshevskoye proizvodstvennoye ob"yedineniye "Zavod im Maslennikova").
696. Pereslavl' Branch of the All Union State Scientific Research and Planning Institute of the Photographic Chemical Industry (Pereslavl'skiy filial VNI i proyektnogo instituta khimiko-fotograficheskoy promyshlennosti).

VI. AUTHOR INDEX


ATE
LMED
8