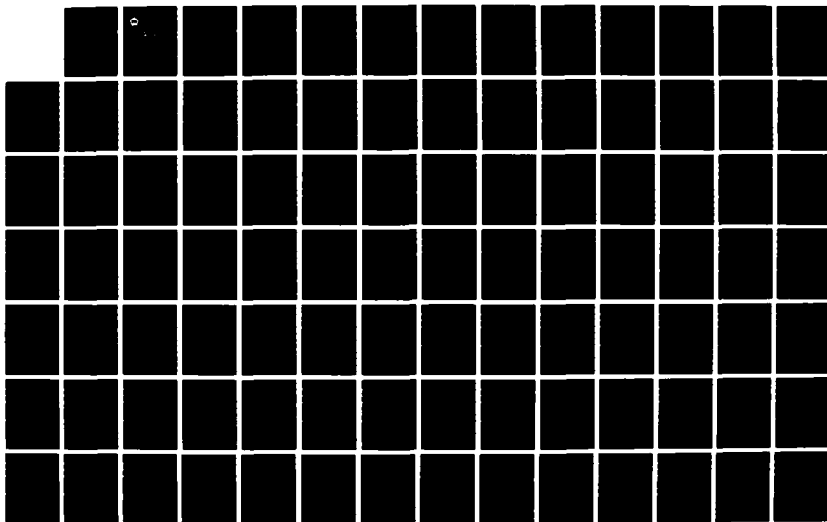


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20. ABSTRACT  This is the Soviet Laser Bibliography for May-June 1984, and is No. 71 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; adaptive optics; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.		

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## INTRODUCTION

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1984, 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 Soviet Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry 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.

We are now producing the entire bibliography on computer. To make our bibliography compatible with other data bases, we have converted the source abbreviations from our previous practice of those used in the Soviet Union to the letter codens generally used in our own government. Likewise, we have converted the affiliations designations from numbers to letter codens. The authors' affiliations are indicated in parentheses after the authors' names in the text. Empty parentheses indicate the affiliation was not given. A source abbreviations list, authors' affiliations list, and author index are included in the back of the bibliography.

SOVIET LASER BIBLIOGRAPHY, MAY - JUNE 1984

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## I. BASIC RESEARCH

### A. SOLID STATE LASERS

#### 1. Crystal

##### a. Miscellaneous

1. Arutyunyan, S.R.; Bagdasarov, Kh.S.; Dodokin, A.P.; Kevorkov, A.M. (IKAN). Thermal conductivity of a  $Y_{1.5}Er_{1.5}Al_5O_{12}$  crystal in the temperature range from 5K to 300K. KVEKA, no.6, 1984, 1284-1286.
  2. Belyy, N.M.; Gorban', I.S.; Gubanov, V.A. (KGU). Laser microresonator based on electron-hole fluid in lead iodide crystals. FTVTA, no. 6, 1984, 1630-1633.
  3. Kaminskiy, A.A.; Sil'vestrova, I.M.; Sarkisov, S.E.; Denisenko, G.A. (). Investigation of trigonal  $(La_{1-x}Nd_x)_3Ga_5SiO_{14}$  crystals. Part 2. Spectral laser and electromechanical properties. PSSAB, v. A80, no. 2, 1983, 607-620. (RZFZA, 84/5L907).
  4. Yershov, N.N.; Zakharov, G.M.; Nikitinskaya, T.I.; Yagov, G.V. (). The x-ray luminescence of pure  $CdF_2$  crystals and crystals activated by Sm and Er. ZPSBA, v.40, no.6, 1984, 1019-1021.
  5. Yorz, J. (from U.S.); Ippen, E. (from U.S.); Shevel', S.G. (IFANUK). Picosecond laser generation from mixed single crystals of  $Zn(x)Cd(1-x)S$  in an external resonator. KVEKA, no.6, 1984, 1270-1273.
  6. Zharikov, Ye.V.; Kitayeva, V.F.; Osiko, V.V.; Rustamov, I.R.; Sobolev, N.N. (FIAN). Elastic, photoelastic and thermoelastic characteristics of gadolinium-scandium-gallium garnet. FTVTA, no. 5, 1984, 1517-1519.
- b. Ruby
- c. LiF
7. Mikhnov, S.A.; Rakush, V.V.; Khyuppenen, V.P.; Asayenok, N.A. (). The possibilities for increasing the efficiency of  $LiF:F^{2+}$  crystal lasers due to improving the technology of radiation coloring. ZPSBA, v.40, No.5, 1984, 750-754.

## 2. Rare Earth

### a. Miscellaneous

8. Antipenko, B.M.; Mak, A.A.; Sukhareva, L.K. (). BaEr(sub2)F(sub8):Tm+Ho laser which operates by a cross-relaxation scheme. PZTFD, no.9, 1984, 513-517.
9. Zharikov, Ye.V.; Kalitin, S.P.; Laptev, V.V.; Mayyer, A.A.; Osiko, V.V. (IOF). Search for and development of gallium garnet active media for lasers. IOF. Preprint, no. 135, 1984, 37 p.

### b. Nd3+

10. Apanasevich, P.A.; Zaporozhchenko, V.A.; Kachinskiy, A.V.; Petryakov, V.M.; Sobolev, S.S.; Tylets, N.A.; Chalkin, S.F. (IFANB). A direct oscillographic investigation of the characteristics of a YAG:Nd3+ laser with active mode lock. KVEKA, no.5, 1984, 1033-1037.
11. Apanasevich, P.A.; Zaporozhchenko, V.A.; Zaporozhchenko, R.G.; Kachinskiy, A.V. (IFANB). Phase effects during intraresonator frequency doubling of ultrashort pulses. KVEKA, no.5, 1984, 897-903.
12. Aponin, G.I.; Besshaposhnikov, A.A.; Konvisar, P.G.; Rustamov, S.R. (). A multiple-beam lasing regime for a YAG:Nd3+ laser and its use in laser anemometry. KVEKA, no.6, 1984, 1207-1210.
13. Bondarev, A.D.; Leonov, Ye.I.; Nyavro, A.V.; Chaldyshev, V.A. (). Features of impurity centers of the Nd3+ ion in Bi(sub12)SiO(sub20) crystals. OPSPA, v.56, No.5, 847-851.
14. Czechowicz, R.; Kosnowski, K. (). Pulsed YAG:Nd laser with a passive Q-switched confocal unstable resonator. BWATA, no. 10, 1983, 85-89. (RZRAB, 84/5Ye129).
15. Denisov, N.N.; Manenkov, A.A.; Prokhorov, A.M. (IOF). Kinetics of lasing and amplification of radiation of a YAG:Nd laser in a periodically Q-switched regime with pulsed pumping. KVEKA, no.5, 1984, 880-886.
16. Golikova, S.N.; Gusev, P.S.; Gus'kov, V.P.; Zhukov, V.A.; Pechenegov, S.M.; Sazhayev, V.D.; Sinitsyn, A.B.; Teterev, N.V.; Trinchuk, B.F. (). YAG:Nd laser with pumping radiation from a high-frequency electrodeless discharge. PRTEA, no. 3, 1984, 190-193.

17. Konovalov, V.A.; Strel'tsov, A.M.; Shalayev, E.A. (). Some features of second harmonic generation in CDA and CDA\* crystals during thermal blooming. KVEKA, no.6, 1984, 1142-1147.
  18. Kvapil, J.; Kvapil, Jos.; Kubelka, J.; Perner, B.; Manek, B. (). YAG:Nd single crystals for pulsed and c-w lasers. JMKA, no. 10, 1983, 275-278. (RZRAB, 84/5Yel26).
- c. Er<sup>3+</sup>
19. Dzheordzhesku, Sh.; Zhekov, V.I.; Murina, T.M.; Popova, M.N.; Studenikin, M.I. (IOF; ISAN). Electron-vibrational spectra of yttrium-erbium-aluminum garnet crystals and their role in laser pumping. FTVTA, no. 5, 1984, 1537-1540.

### 3. Semiconductor

- a. Theory
20. Akimov, Yu.A.; Burov, A.A.; Kordumov, A.I.; Kruchenov, A.N. (). Small-scale e-beam-pumped semiconductor laser radiator. PRTEA, no. 1, 1984, 233-234. (RZFZA, 84/6L605).
  21. Man'ko, M.A.; Mikayelyan, G.T. (FIAN). Properties of gain-induced modes in active semiconductor waveguides. FIAN. Preprint, no. 166, 1984, 23 p.
  22. Nurtdinov, N.R.; Barinova, E.Yu. (MGU). Determining the concentration of nitrogen in gallium phosphide from its photoluminescence spectrum. VMUFA, no. 3, 1984, 59-62.
  23. Yelinson, M.I.; Sukhanov, A.A. (IRE). Intercompound problems in contemporary microelectronics. MKETA, no. 3, 1984, 179-195.
- b. Miscellaneous Homojunction
- c. Miscellaneous Heterojunction
24. Gorelenok, A.T.; Gruzlov, V.G.; Yevstropov, V.V.; Sidorov, V.G.; Tarasov, I.S.; Fedorov, L.M. (FTI). Tunnel currents in InGaAsP/InP p-n heterostructures. FTPPA, no. 6, 1984, 1034-1038.
  25. Gribkovskiy, V.P. (). Streamer discharge in semiconductors.(Review). ZPSBA, v.40, No.5, 1984, 709-718.

26. Karikh, Ye.D. (BGU). Effect of photon transfer on diffusion processes in planar heterolasers. IVUFA, no. 6, 1984, 12-17.
27. Odulov, S.G.; Slyusarenko, S.S.; Soskin, M.S. (IFANUK). A dynamical lattice, free carrier laser in a semiconductor. KVEKA, no. 5, 1984, 869-870.
- d. GaAs
  - e. CdS
  - f. ZnSe
  - g.  $Pb(1-x)Sn(x)Te$
28. Herrmann, K.; Tomm, J.W.; Jalyschko, A.; Bremser, W. (). Behavior of the threshold current densities in dual-wavelength  $Pb(1-x)Sn(x)Te$  injection lasers. PSSAB, v. A80, no. 2, 1983, K113-K116. (RZPZA, 84/6L924).

#### 4. Glass

- a. Miscellaneous
29. Yeshmemet'yeva, Ye.V.; Ivanushkina, A.V.; Kornev, V.V.; Korolev, V.I.; Pavlova, I.A.; Popova, L.G.; Sedov, B.M.; Khalilov, V.Kh. (). Increase in the effectiveness of neodymium phosphate glass lasers by the use of reflectors alloyed with oxides of the rare-earth elements. ZPSBA, v.40, No.5, 1984, 746-750.
- b. Nd
  - c. Er
- B. LIQUID LASERS
- 1. Organic Dyes
    - a. Miscellaneous
30. Bor, Zs.; Szatmari, S.; Szabo, G.; Racz, B. (). Tuning of distributed feedback dye lasers by divergent pumping beams [in English]. APYCA, no. 1-2, 1983, 17-25. (RZPZA, 84/5L983).
31. Dietel, W.; Rudolph, W. (). Study on jet-stream nozzles for c-w dye lasers. EXPPA, no. 6, 1983, 483-492. (RZPZA, 84/6L902).



32. Goryunova, V.V.; Reva, M.G. (MGU). Electron energy transfer in the active media of organic compound lasers. Konferentsiya molodykh uchenykh khimicheskogo fakul'teta MGU, Moskva, 25-28 Jan 1983. Materialy. Chast' 1. VINITI. Deposit, no. 7085-83, 28 Dec 1983, 66-69. (RZFZA, 84/5L890).
  33. Koepke, Cz.; Zietek, B. (). Relations between an amplified laser pulse and amplified spontaneous emission in a dye laser amplifier. ATPLB, v. A64, no. 5, 1983, 569-576. (RZRAB, 84/6Ye158).
  34. Konefal, Z. (). Head for a liquid laser. Patent Poland, no. 119945, 8 Aug 1983. (RZRAB, 84/6Ye163).
  35. Lokhnygin, V.D.; Rogovskiy, O.V.; Silichev, O.O.; Fomichev, A.A. (). Measurement of the optical strength of rapidly changing thermal lenses in laser elements. OPSPA, v. 56, no. 5, 1984, 943-946.
  36. Shvedova, L.A.; Taticolov, A.S.; Darmanyan, A.P.; Kuz'min, V.A.; Krasnaya, Zh.A. (IKhF). An investigation of the photophysical and photochemical properties of ketocyanine dyes: polyenic bis-omega,omega prime aminoketones. DANKA, v.276, no.1, 1984, 164-168.
  37. Stoylov, Yu.Yu.; Startsev, A.V. (FIAN). The spatial, angular, and spectral retunings of radiation from complex organic compound vapor lasers. KVEKA, no.6, 1984, 1081-1083.
- b. Rhodamine
38. Lisitsyn, V.M.; Lyakh, G.O.; Orlovskiy, V.M.; Osipov, V.V.; Urbazayev, M.N. (). A rhodamine 6G laser with cathode luminescent pumping. PZTFD, no.9, 1984, 559-561.
  39. Piskarskas, A.; Smil'gyavichyus, V.; Umbrasas, A.; Chesnulyavichyus, I. (VilGU). Distributed-feedback dye laser with pumping by subnanosecond and nanosecond light pulses. PZTFD, no.9, 1984, 526-529.
  40. Smirnov, V.S.; Studenov, V.I.; Rozuvanova, V.A. (). An investigation of the spectral and spatial-angular characteristics for lasing in solutions of rhodamine 6G in a small-base resonator. OPSPA, v.56, no.5, 1984, 884-888.

- c. Polymethine
- d. Coumarin
- e. Phthalimide
- f. Cyanine
- g. Xanthene
- h. POPOP

## 2. Inorganic Liquids

- 41. Svetashev, A.G.; Tsvirko, M.P. (). Luminescence of the  $Ce^{3+}$  ion in aqueous solutions. OPSPA, v. 56, no. 5, 1984, 842-846.

## C. GAS LASERS

### 1. Theory

- 42. Akchurin, G.G.; Sinichkin, Yu.P.; Tuchin, V.V. (). Using a modulation method to determine the relative excitation in gas lasers. RAELA, no. 6, 1984, 1207-1209.
- 43. Dimitrov, D.I.; Barudov, S.T. (). Volt-ampere characteristics of the discharge in the active element of a c-w ion laser. ELPBA, no. 10, 1983, 19-21. (RZRAB, 84/5Ye91).
- 44. Vorob'yeva, L.P.; Mal'tsev, A.N. (). The use of a generalized reabsorption method for investigating the plasmas of gas lasers. ZPSBA, v.40, no.5, 1984, 738-740.

### 2. Simple Mixtures

#### a. Miscellaneous

- 45. Bunkin, F.V.; Derzhiyev, V.I.; Mesyats, G.A.; Skakun, V.S.; Tarasenko, V.F.; Yurovskiy, V.A.; Yakovlenko, S.I. (IOF). Radiation from mixtures of inert gases with hydrogen under excitation by an electron beam. KVEKA, no.6, 1984, 1277-1280.
- 46. Latush, Ye.L.; Sem, M.F.; Chebotarev, G.D. (RGU). Study on processes of populating ionic levels of mercury in a He-Hg discharge using a population modulation method. IVUFA, no. 5, 1984, 90-97.

b. He-Ne

47. Akhmedov, M.K.; Mirzayev, A.T.; Mirinoyatov, M.M. (). Study on the characteristics of a medium-power He-Ne laser with transverse microwave pumping. *Radiofizika i spektroskopiya*. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 67-78. (RZRAB, 84/6Yel03).
48. Aleshin, V.A.; Dubrov, M.N.; Smetankina, G.A. (IRE). Laser with disperse automatic frequency tuning. *PRTEA*, no. 3, 1984, 240.
49. Devdariani, A.Z.; Zagrebin, A.L. (LGU). Non-resonance transfer of excitation in He(2 sup1 S, 2 sup3 S)+Ne reactions. *ZETFA*, v. 86, no. 6, 1984, 1969-1980.
50. Kupriyanov, L.Yu.; Tsivenko, V.I.; Myasnikov, I.A. (NIFKhI). Interaction of metastable atoms of inert gases with the surface of semiconductors and dielectrics. *ZFKHA*, no. 5, 1984, 1156-1159.
51. Nikonchuk, M.O. (). A ring Zeeman laser in the regime of longitudinal mode lock. *ZPSBA*, v.40, no.5, 1984, 741-746.

c. He-Xe

52. Logvinov, V.I.; Tsar'kov, V.A. (). Evaluating the maximum power of a He-Xe laser operating in the 3.51 um region. *RAELA*, no. 6, 1984, 1145-1151.
53. Mirinoyatov, M.M.; Solov'yev, I.A. (). Relationship of the output power of an He-Xe laser to the discharge parameters. *Radiofizika i spektroskopiya*. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 31-44. (RZRAB, 84/6Yel02).

d. He-Kr

e. Ar-Xe

54. Baranov, V.V.; Basov, N.G.; Danilychev, V.A.; Dudin, A.Yu.; Zayarnyy, D.A.; Ustinovskiy, N.N.; Kholin, I.V.; Chugunov, A.Yu. (FIAN). An electroionization laser based on metastable Xe atoms. *ZFPRA*, v.39, no.9, 1984, 426-428.

### 3. Molecular Beam and Ion

- a. Miscellaneous
  - b. CO2
55. Apollonov, V.V.; Akhunov, N.; Minenkov, V.R.; Pel'tsman, S.S.; Prokhorov, A.M.; Semkin, B.V.; Firsov, K.N.; Shubin, B.G. (IOF). An electric discharge CO2 laser with a large radiation aperture. KVEKA, no.6, 1984, 1241-1246.
  56. Artamonov, A.V.; Konev, V.A.; Likhanskiy, V.V.; Napartovich, A.P. (). Fluctuations of the radiation power of gas-flow CO2 lasers with unstable resonators. KVEKA, no.6, 1984, 1199-1206.
  57. Baranov, V.Yu.; Borzenko, V.L.; Kozochkin, S.M.; Kuleshov, V.P.; Makarov, K.N.; Malyuta, D.D.; Petrushevich, Yu.V.; Satov, Yu.A.; Starostin, A.N.; Strel'tsov, A.P.; Chalkin, S.F. (IAE). Study on coherent effects in the amplification of nanosecond CO2 laser pulses. IAE. Preprint, no. 3837/7, 1983, 17 p. (RZFZA, 84/6L851).
  58. Bychkov, Yu.I.; Mesyats, G.A.; Orlovskiy, V.M.; Osipov, V.V. (). Using a sealed-off electron source for developing a CO2 laser. Sil'notochnyye impul'snyye elektronnyye puchki v tekhnologii. Novosibirsk, Nauka, 1983, 155-159. (RZFZA, 84/5L861).
  59. Gubarev, A.V.; Nekrasov, A.A.; Novikova, N.K. (). An investigation of a pulsed periodic gas discharge in a chamber with a Helmholtz resonator. ZPMFA, no. 3, 1984, 32-34.
  60. Horak, R.; Valek, V. (). Various problems of CO2 lasers and their application. JM KOA, no. 11, 1983, 307-311. (RZFZA, 84/6L861).
  61. Horak, R.; Valek, V. (). Various problems of CO2 lasers and their application. JM KOA, no. 12, 1983, 343-348. (RZFZA, 84/6L1143).
  62. Imankulov, Z.O.; Mirinoyatov, M.M. (). Theoretical study of the parameters of a CO2 laser in a rectangular discharge tube under transverse r-f excitation. Radiofizika i spektroskopiya. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 52-66. (RZRAB, 84/6Ye50).

63. Kolesnikov, V.Yu.; Orlov, B.V.; Pol'skiy, Yu.Ye.; Khokhlov, Yu.M. (KAI). An electric discharge chamber for coaxial CO<sub>2</sub> lasers. KVEKA, no.5, 1984, 957-961.
64. Kornilov, S.T.; Protsenko, Ye.D.; Chirikov, S.N. (MIFI). An investigation of the conditions for lasing at several transitions in waveguide CO<sub>2</sub>-lasers with a diffraction grating. KVEKA, no.6, 1984, 1225-1229.
65. Mirinoyatov, M.M.; Imankulov, Z.O. (). Electric field distribution and visible luminescence intensity of a discharge along and transverse to the discharge tube of a transversely r-f pumped CO<sub>2</sub> laser. Radiofizika i spektroskopiya. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 23-30. (RZRAB, 84/6Ye51).
66. Mirzayev, A.T.; Sharakhimov, M.Sh. (TashGU). A highly stable compact CO<sub>2</sub> laser with high-frequency excitation. KVEKA, no.6, 1984, 1236-1241.
67. Mirzayev, A.T.; Sharakhimov, M.Sh.; Shayakhov, R.V. (). Study on instability of output power of an r-f pumped CO<sub>2</sub> laser. Radiofizika i spektroskopiya. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 10-22. (RZRAB, 84/6Ye52).
68. Sutyagin, A.N.; Yur'yev, M.S. (). An independent discharge cathode layer in mixtures of CO<sub>2</sub>:N<sub>2</sub>:He gases at atmospheric pressure. ZTEFA, no.5, 1984, 972-974.
69. Zamotrinskiy, V.A.; Kovalenko, Ye.S.; Kolchina, G.A.; Shangina, L.I. (). Two methods for calculating the spatial coherence function. ZPSBA, v.40, no.5, 1984, 817-821.
- c. CO
70. Aliyev, Ye.T.; Basov, N.G.; Kovsh, I.B.; Lesnov, I.A.; Sobolev, V.A. (FIAN). The optical homogeneity of the active medium of a pulsed, electrically ionized CO laser. KVEKA, no. 5, 1984, 874-879.
- d. Noble Gas
- e. N<sub>2</sub>
71. Santa, I.; Hebling, J.; Kozma, L. (). Narrow-band N<sub>2</sub> laser system with variable wavelength in the vicinity of 337.1 nm [in English]. APYCA, no. 3-4, 1983, 117-119. (RZFZA, 84/6L864).

72. Serbezov, V.S.; Kulaksuzov, P.I.; Todorov, T.V. (). High-power compact nitrogen laser. ELPBA, no. 9, 1983, 12-13. (RZRAB, 84/6Ye55).
- f. I2
73. Bugrim, Ye.D.; Girenko, Yu.N.; Makrenko, S.N.; Nesprava, V.V. (DGU). Determining the rate of vibrational relaxation of electron pumped iodine molecules under pulsed excitation. UFZHA, no. 5, 1984, 691-696.
74. Kiselev, V.M.; Grenishin, A.S.; Kotlikova, T.N.; Rodina, L.I. (). Passive mode lock in an iodine laser placed in a longitudinal, non-uniform magnetic field. KVEKA, no.5, 1984, 961-968.
- g. H2
- h. NH3
75. Vasil'yev, B.I.; Yastrebkov, A.B. (FIAN). The feasibility of a high pressure NH3 laser. KVEKA, no.5, 1984, 1052-1060.
- i. CF4
- j. N2O
- k. H2O
- l. D2O
- m. Submillimeter
76. Kubarev, V.V. (IYaFSOAN). High-power HCN laser for plasma diagnostics. IYaFSOAN. Preprint, no. 9, 1984, 17 p. (KNLTA, 26/84, 22285).
- n. Metal Vapor
77. Adamowicz, T.; Kaminska, E.; Siejca, A. (). Study on a copper cavity-type laser with pulsed power supply. EKNTB, no. 10, 1983, 14-17, 2, 48. (RZRAB, 84/6Ye97).
78. Bokhan, P.A.; Sorokin, A.R. (ITF). Pumping of a lead vapor laser by an electron beam. PZTFD, no.10, 1984, 620-623.

79. Borovich, B.L.; Buchanov, V.V.; Molodykh, E.I. (). Numerical modeling of a copper vapor laser with electron beam pumping. I. The electron energy distribution function in a laser plasma. KVEKA, no.5, 1984, 1007-1014.
80. Divin, V.D.; Isakov, V.K. (). An investigation of pulsed lasing in iron vapor. KVEKA, no.5, 1984, 1038-1041.
81. Kazakov, V.V.; Markova, S.V.; Petrash, G.G. (FIAN). An investigation of physical processes in a barium vapor pulsed laser. KVEKA, no.5, 1984, 949-956.
82. Kravchenko, V.F.; Mikhalevskiy, V.S.; Chubar', S.P.; Shelepo, A.P. (NIIFRGU). A strontium vapor ion laser with UHF excitation. KVEKA, no.6, 1984, 1077-1078.
83. Tolmachev, Yu.A.; Fogel', D. (). Excitation of an ion spectrum for alkaline metals as the result of the non-resonance charge exchange of He<sup>+</sup> ions at thermal energies. OPSPA, v.56, no.6, 1984, 991-994.
84. Vartanyan, T.A.; Khromov, V.V. (). A pyrolysis bleaching wave in molecular cesium vapors. OPSPA, v. 56, no. 5, 1984, 948-950.
85. Zharikov, V.M.; Zubov, V.V.; Lesnoy, M.A.; Lyabin, N.A.; Chursin, A.D. (). A gaseous thermal lens in a copper vapor laser. KVEKA, no.5, 1984, 918-923.
- o. Gasdynamic
86. Doroshenko, V.M.; Kudryavtsev, N.N.; Novikov, S.S. (). Study on gasdynamic CO<sub>2</sub> lasers using mixtures with a high hydrogen content. Khimicheskaya fizika, no. 3, 1984, 405-413. (RZFZA, 84/6L884).
87. Sal'nikov, V.A. (). Flow features for a vibrationally relaxing gas in nozzles with a part of constant cross-section in the region of the throat. ZPMFA, no. 3, 1984, 61-66.
88. Vatazhin, A.B.; Valeyev, R.S.; Likhter, V.A.; Shul'gin, V.I.; Yagodkin, V.I. (). Study on turbulent steam jets with condensation and injection of impurity particles into the flow. IMZGA, no. 3, 1984, 53-61.

#### 4. Excimer

89. Basov, N.G.; Glotov, Ye.P.; Danilychev, V.A.; Dolgikh, V.A.; Kerimov, O.M.; Myznikov, Yu.F.; Soroka, A.M.; Tamanyan, G.Yu.; Cheburkin, N.V. (FIAN). Investigation of a C-A transition in the XeF\* molecule during the pumping of XeF<sub>2</sub> by excimer radiation. KVEKA, no.6, 1984, 1162-1167.

#### 5. Dye Vapor

### D. CHEMICAL LASERS

#### 1. Miscellaneous

#### 2. F<sub>2</sub>+H<sub>2</sub>(D<sub>2</sub>)

90. Baranov, V.Yu.; Vysikaylo, F.I.; Dem'yanov, A.V.; Malyuta, D.D.; Tolstov, V.F. (). Parametric investigations of a pulsed non-chain HF laser. KVEKA, no.6, 1984, 1173-1179.
91. Baykov, E.U.; Bashkin, A.S.; Orayevskiy, A.N. (FIAN). The effect on the characteristics of an H<sub>2</sub>-F<sub>2</sub> laser of energy branching in a hydrogen fluorination reaction. KVEKA, no. 5, 1984, 1026-1032.
92. Porodinkov, O.Ye. (FIAN). Efficient pulsed HF lasers triggered by flashlamp photolysis. FIAN. Dissertation, 1984, 18 p.

#### 3. Photodissociation

93. Zuyev, V.S.; Mikheyev, L.D.; Stavrovskiy, D.B. (FIAN). A photodissociation XeF laser with a lasing efficiency of approximately 1%. KVEKA, no.6, 1984, 1080-1081.

#### 4. Transfer

94. Basov, N.G.; Igoshin, V.I.; Katulin, V.A.; Orayevskiy, A.N.; Pichugin, S.Yu. (FIAN). Photon-branching chain-reaction chemical lasers. FIAN. Preprint, no. 121, 1984, 16 p.
95. Baykov, E.U.; Bashkin, A.S.; Ramzatov, N.M.; Orayevskiy, A.N.; Porodinkov, O.Ye. (FIAN). Numerical multiparametric optimization of a pulsed chemical D<sub>2</sub>-F<sub>2</sub>-CO<sub>2</sub> laser. FIAN. Preprint, no. 167, 1984, 34 p.



96. Konoplev, N.A.; Stepanov, A.A.; Shcheglov, V.A. (FIAN). Two-dimensional numerical analysis of a ring model of a DF-CO<sub>2</sub> c-w chemical laser, allowing for reagent mixing effects. FIAN. Preprint, no. 155, 1984, 56 p.

5. O<sub>2</sub>+I<sub>2</sub>

6. CS<sub>2</sub>+O<sub>2</sub>

97. Pozdneyev, S.A. (FIAN). Applying quantum theory to scattering in a three body system to evaluate the vibrational excitation of reaction products from O+CS→CO+S. KHVKA, no. 3, 1984, 280-283.

7. SF<sub>6</sub>+H<sub>2</sub>

#### E. COMPONENTS

##### 1. Miscellaneous

98. Afyan, V.V.; Vartanyan, A.V.; Martirosyan, R.G.; Ryabikov, S.V.; Strebkov, D.S.; Tver'yanovich, E.V. (VNIITArm). Optical concentrator and a method for making holograms for it. OTIZD, no. 22, 1984, 1097563.

##### 2. Resonators

###### a. Design and Performance

99. Boytsov, V.F. (). Radiation method in the theory of Gaussian beams. OPSPA, v.56, no.6, 1984, 1084-1087.
100. Kukhta, A.V. (). Optimization of resonators for far IR and submillimeter wavelength lasers. RAELA, no. 6, 1984, 1134-1139.
101. Manishin, V.G.; Pismanik, G.A. (IPF). Suppression of interference losses in multichannel resonators with wavefront-reversing mirrors. KVEKA, no.6, 1984, 1215-1220.
102. Nazarov, A.U. (). Calculating the effect of the inhomogeneity of a medium on the parameters of an optical resonator. Radiofizika i spektroskopiya. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 45-51. (RZRAB, 84/6Ye492).
103. Orlov, A.I.; Gavrilov, V.F. (BPI). Method for compensating the effect of imperfections in elements of a laser resonator on the characteristics of the generated radiation. Priborostroyeniye, no. 6, Minsk, 1984, 22-26.

### b. Mode Kinetics

104. Dorofeyev, I.A.; Sokolov, V.A. (LGU). Problems of locking in a two-mode ring gas laser with a two-isotope active medium. VINITI. Deposit, no. 891-84, 14 Feb 1984, 46 p. (DERUD, 6/84, 267).
105. Komarov, K.P.; Ugozhayev, V.D. (). Steady-state  $2\pi$  pulses during passive locking of laser modes. KVEKA, no.6, 1984, 1167-1173.
106. Levit, A.L.; Ovchinnikov, V.M. (). The stability of a ring resonator with a non-planar axial contour. ZPSBA, v.40, no.6, 1984, 936-939.
107. Mel'nikov, L.A.; Savel'yev, I.I.; Chetverikov, V.I. (NIIMF). Dynamics of a ring gas laser with a circularly anisotropic resonator in a lasing regime considerably above threshold. KVEKA, no.5, 1984, 936-942.
108. Naniy, O.Ye.; Shelayev, A.N. (MGU). Magneto-optical effects in a YAG:Nd<sup>3+</sup> solid state ring laser with a non-planar resonator. KVEKA, no.5, 1984, 943-949.
109. Pushkarova, R.M.; Metev, S.M.; Savchenko, S.K. (). Study on the possibility of laser tuning of dual-mode resonators. ELPBA, no. 9, 1983, 19-21. (RZRAB, 84/6Ye489).
110. Zamotrinskiy, V.A.; Kovalenko, Ye.S.; Kolchina, G.A.; Shangina, L.I. (). An investigation by a numerical method of the degree of coherence and the structure of the modes of stable and unstable resonators in the process of lasing. ZPSBA, v.40, no.6, 1984, 1016-1019.
111. Zverev, V.V.; Rubinshteyn, B.Ya. (). Absorptive multistability in a system of three-level centers. VINITI. Deposit, no. 522-84, 30 Jan 1984, 8 p. (RZPZA, 84/5L974).

### 3. Pump Sources

112. Atanasov, P.A.; Vekov, I.G. (). Adjustable three-phase rectifier for high-power lasers. ELPBA, no. 10, 1983, 32-33. (RZRAB, 84/5Ye430).
113. Brazhnikov, A.Ye.; Ionova, R.N.; Minayev, V.P.; Mitauer, S.Ya.; Turkov, Yu.G. (). Surface hardening with flashlamp irradiation. SVETA, no. 6, 1984, 3.

114. Budkin, L.A.; Pikhteleev, A.I.; Puzanov, S.L.; Fateyev, B.P. (). Quantum discriminator with laser pumping. RAELA, no. 6, 1984, 1140-1144.
115. Bulatov, O.G.; Ivanov, V.S.; Sharapov, Yu.R. (MEI). Power supply for a high-power multi-tube CO2 laser. MEI. Trudy, no. 596, 44-49. (RZFZA, 84/5L732).
116. Bylinkin, A.F.; Vladul, A.T. (). Regeneration in discharge tubes for LG-56 He-Ne lasers. PRTEA, no. 1, 1984, 211. (RZFZA, 84/6L700).
117. Gadiyak, G.V.; Ponomarenko, A.G.; Travkov, I.V.; Shveygert, V.A. (ITPM). Conditions for forming a single self-sustained gas discharge. ITPM. Preprint, no. 27, 1983, 50 p. (RZFZA, 84/5G313).
118. Gryaznov, A.A.; Katsoyev, A.A.; Miloslavov, V.A. (). Optical signal shaper. OTIZD, no. 41, 1983, 1053059. (RZRAB, 84/6Ye519).
119. Guendel, H.; Ross, W.; Seliger, K.; Volkmann, H. (). Compact accumulator and pulse-shaping unit for a pulsed gas laser. Patent GDR, no. 201547, 20 Jul 1983. (RZRAB, 84/5Ye426).
120. Il'yushko, V.G.; Kravchenko, V.F.; Mikhalevskiy, V.S. (). Sectioned metal charge tubes for an ultraviolet nitrogen laser with a longitudinal discharge. PRTEA, no. 1, 1984, 178-180. (RZFZA, 84/6L639).
121. Ivanov, I.Ts.; Trifonov, A.I. (authors from Bulgaria). (OIYaI). Nanosecond high-voltage pulse generator for igniting high-voltage discharges. PRTEA, no. 3, 1984, 113.
122. Terlecki, J.; Niedzielski, W.; Krasuski, A. (). Pulsed circuit for ignition and power supply of laser flashlamps. Patent Poland, no. 119114, 10 Aug 1983. (RZRAB, 84/6Ye511).
123. Yeremin, V.K. (FTI). Current pulse amplifier as a power supply for semiconductor lasers. PRTEA, no. 3, 1984, 128.

#### 4. Cooling Systems

#### 5. Deflectors

124. Barauskas, R.A.; Malishauskas, M.A.; Ragul'skis, K.M.; Shvedas, L.S. (KaPI). Beam deflection device. OTIZD, no. 36, 1983, 1045205. (RZRAB, 84/5Ye222).

125. Mayyer, B.O.; Stasel'ko, D.I.; Yurlova, L.A. (). Study of hologram elements on bichromated gelatin for transforming the spatial structure of laser radiation. OPSPA, v.56, No.6, 1984, 1101-1110.
126. Tishchenko, Yu.N.; Trubetskoy, A.V. (). Acoustooptic cells for deflecting semiconductor laser radiation. AVMEB, no. 3, 1984, 103-105.

#### 6. Attenuators

#### 7. Collimators

127. Andreyev, L.N.; Nikiforova, G.L.; Okishev, S.G.; Perov, I.Yu.; Filimonov, A.A. (LITMO). Afocal attachment for collimating laser radiation. IVUBA, no. 5, 1984, 93-96.

#### 8. Diffraction Gratings

128. Afanas'yev, Yu.N.; Karpov, S.Yu.; Mizerov, M.N.; Portnoy, Ye.L.; Smirnitkiy, V.B. (FTI). Concentrating holographic diffraction gratings. FTI. Preprint, no. 849, 1983, 29 p. (RZFZA, 84/5L594).
129. Butkus, V.; Vaytkus, Yu.; Gaubas, E.; Yarashyunas, K. (). Dynamic gratings in amorphous silicon. LSFBA, no. 6, 1983, 97-99. (RZFZA, 84/6N637).
130. Goryachev, D.N.; Dmitruk, N.L.; Kamuz, A.M.; Litovchenko, V.G. (). Splitting of the surface polariton spectrum by a holographic grating. Poverkhnost': Fizika, khimiya, mekhanika, no. 2, 1984, 44-47. (RZFZA, 84/5L403).
131. Kirilenko, A.A.; Kusaykin, A.P.; Sirenko, Yu.K. (IRFEANuk). Non-mirror wave reflection by diffraction gratings. IRFEANuk. Preprint, no. 212, 1983, 33 p. (KNLTA, 26/84, 22284).
132. Vasnetsov, M.V.; Soskin, M.S.; Taranenko, V.B. (IFANuk). Diffraction by volume phase gratings in a glancing angle region. IFANuk. Preprint, no. 15, 1984, 19 p.

#### 9. Focusers

133. Dement'yev, A.S.; Domarkene, D.P. (IFANLi). Focal shift during diffraction of focused radiation by a small rectangular aperture. LFSBA, no. 3, 1984, 59-68.

## 10. Windows

134. Nistor, L.C.; Nistor, V.S.; Teodorescu, V.; Voda, M.M. (). Method for finishing KCl optical windows for IR lasers. Patent Romania, no. 80106, 30 Nov 1982. (RZRAB, 84/5Ye443).

## 11. Polarizers

135. Zhdanova, L.A.; Pridatko, G.D. (GOI). Study on the optical properties of interference polarizers in the 0.25-1.2  $\mu\text{m}$  spectral region. OPMPA, no. 6, 1984, 7-10.

## 12. Amplifiers

### 13. Lenses

### 14. Filters

136. Bulanin, M.O.; Burtsev, A.P.; Poretskiy, S.A. (). Study on the processes in a nonlinear cryogenic filter by the pulse shape of the radiation in the 10.6  $\mu\text{m}$  region. OPSPA, v. 56, no. 5, 1984, 776-778.
137. Kuznetsov, B.V.; Naumov, K.V.; Semenov, L.G. (). Tunable interference polarization filter. OTIZD, no. 36, 1983, 1045202. (RZRAB, 84/5Ye446).

## 15. Beam Splitters

138. Blanaru, C.; Popescu, Gh.; Georgescu, C.; Brunfeld, A. (). Beam splitter for an interferometer with a 90 degree phase shift. Patent Romania, no. 78929, 30 Apr 1982. (RZRAB, 84/6Ye514).

## 16. Mirrors

139. Borisova, M.S.; Mazan'ko, I.P. (). The reflection matrix of a ferromagnetic mirror. OPSPA, v.56, No.5, 1984, 911-914.
140. Protsko, S.V.; Khanokh, B.Yu.; Khapalyuk, A.P. (BGU). Hollow trihedral optical corner reflector ( $\pi/2$ ,  $\pi/2$ ,  $\pi/4$ ) with small deformations of the dihedral angles in an autocollimation system. VBMFA, no. 1, 1984, no. 3-4. (RZFZA, 84/6L686).
141. Protsko, S.V.; Khanokh, B.Yu.; Khapalyuk, A.P. (). Radiation properties of trihedral corner optical reflectors ( $\pi/2$ ,  $\pi/2$ ,  $\pi/s$ ,  $s$  is even). VBSFA, no. 1, 1984, 88-93. (RZFZA, 84/6L634).

142. Spikhal'skiy, A.A. (FIAN). Effect of the absorption of light in metal on the efficiency of reflection of surface e-m waves from distributed Bragg mirrors. FIAN. Preprint, no. 289, 1983, 11 p. (RZFZA, 84/5L359).
143. Vitrichenko, E.A.; Yevseyev, O.A.; Isayev, V.I.; Lapshin, V.I.; Leonov, V.N.; Potapov, Yu.A.; Prokhorov, A.M.; Sagdeyev, R.Z.; Salomonovich, A.Ye.; Trushin, Ye.V.; Fridlyander, I.N. (FIAN). Study on the possibility of developing large-size light-weight metal mirrors for the longwave IR range of the spectrum. FIAN. Preprint, no. 291, 1983, 21 p. (RZFZA, 84/5L658).
144. Walther, H.G. (). Study on the roughness of interfaces in dielectric multilayer systems. EXPPA, no. 6, 1983, 519-524. (RZFZA, 84/6L633).

#### 17. Detectors

145. Adonts, G.G.; Dzhotyan, G.P.; Kanetsyan, E.G. (). Visualization of an infrared image in a resonant medium. ZPSBA, v.40, no.5, 1984, 846-849.
146. Astrov, Yu.A.; Portsel', L.M. (FTI). Photoconductivity of weakly compensated Si<In> at 10.6  $\mu\text{m}$  from ionization of X-centers. FTTPA, no. 6, 1984, 1052-1055.
147. Glebov, D.M.; Sutyryn, A.O. (LETI). Enlargement of the dynamic range of optical signal detectors. LETI. Izvestiya, no. 333, 1983, 22-25. (RZRAB, 84/5Ye405).
148. Legkiy, V.N.; Mitsenko, I.D. (). Effect of the shape and duration of the enveloping light flash on the sensitivity of an inertial photodetector with an avalanche photodiode. RAELA, no. 2, 1984, 365-369.
149. Solc, V.; Cuchy, Z. (). Pyroelectric radiation detectors. JMkoa, no. 10, 1983, 288. (RZRAB, 84/5Ye410).
150. Veselago, V.G.; Vinogradova, G.I.; Gareyev, R.R.; Kharlamov, V.F.; Valikhanova, M.I.; Kalinnikov, V.T.; Ol'khovskiy, V.I. (IOF). Design and basic characteristics of an IR detector based on the photomagnetic effect in CdCr(sub2)Se(sub4). IOF. Preprint, no. 112, 1984, 32 p.

## 18. Modulators

151. Berezhnoy, A.A.; Buzhinskiy, A.A.; Groznov, M.A.; Popov, Yu.V.; Soms, L.N.; Stepanov, A.I. (). Study on the frequency-contrast and time characteristics of spatial light modulators based on a transverse electro-optic effect in bismuth silicate crystals. OPSPA, v. 56, no. 6, 1984, 1126-1130.
152. Demidov, A.A.; Yesayan, G.M.; Kalaydzidis, Ya.L. (MGU). Low-voltage system for extracting an individual light pulse from a picosecond pulse train. PRTEA, no. 3, 1984, 186-187.
153. Mel'nikova, S.V.; Anistratov, A.T. (IFSOAN). E-O properties of some  $ABCl_3$  crystals with perovskite structures. FTVTA, no. 6, 1984, 1906-1908.
154. Nikonchuk, M.O. (KGU). Laser with intracavity anisotropic amplitude modulation. UkrNIINTI. Deposit, no. 32Uk-D84, 11 Jan 1984, 35 p. (RZRAB, 84/5Ye89).
155. Sosenskiy, A.M.; Kazantseva, N.N.; Koshkin, G.V.; Feygin, D.M.; Pershin, M.P. (GOI). PLZT ceramic modulator for unpolarized radiation. OPMPA, no. 6, 1984, 28-29.

### F. NONLINEAR OPTICS

#### 1. General Theory

156. Alum, Kh.P.; Koval'chuk, Yu.V.; Ostrovskaya, G.V. (FTI). Nonlinear interferometry. ZTEFA, no.5, 1984, 896-904.
157. Baryshevskiy, V.G.; Dubovskaya, I.Ya. (). Complex and anomalous Doppler effects in the radiation spectrum of a two-dimensional fast oscillator. VBSFA, no. 1, 1984, 84-87. (RZFZA, 84/6L12).
158. Bezdetnyy, B.P.; Glushchenko, A.A.; Dovgiy, B.P. (). Approximate solution of an edge problem in nonlinear optics. Matematicheskaya fizika, no. 33, Kiyev, 1983, 54-60. (RZFZA, 84/5L846).
159. Bogolyubov, N.N.; Fam Le Kiyen; Shumovskiy, A.S. (OIYaI). Intensity of superradiative oscillation in two-level systems. OIYaI. Preprint, no. R17-83-648, 1983, 12 p. (RZFZA, 84/6I45).

160. Botvich, A.N.; Podoprigora, V.G.; Shabanov, V.F.; Shestakov, N.P.; Vtyurin, A.N. (). Optical properties of molecular crystals. Phenomenological approach. PSSBB, v. B120, no. 2, 1983, 491-501. (RZFZA, 84/5L358).
161. Kirichenko, N.A. (IOF). Stability of steady states of nonlinear distributed systems. IOF. Preprint, no. 176, 1984, 53 p.
162. Mantsyzov, B.I.; Kuz'min, R.N.; Serebryakov, S.L. (MGU). Superradiation in a discrete periodic medium. VINITI. Deposit, no. 861-84, 13 Feb 1984, 30 p. (RZFZA, 84/5L813).
163. Mkrtchyan, V.Ye.; Ter-Mikayelyan, M.L.; Chaltykyan, V.O. (). Two-photon radiation by atoms in a resonance radiation field. DANAA, no. 4, 1983, 178-181. (RZFZA, 84/6L832).
164. Murina, T.A.; Rozanov, N.N. (). Fluctuations in hybrid bistable optical devices. ZTEFA, no. 1, 1984, 175-178. (RZFZA, 84/6L845).
165. Osipov, Ye.B.; Osipova, N.A. (CherGPI). Two-photon interband transitions of electrons across deep impurity levels in narrowband semiconductors. FTPPA, no. 12, 1983, 2216-2218.
166. Stasyuk, I.V.; Ivankiv, Ya.L. (). Theory of Raman scattering in order-disorder type ferroelectric crystals. Fizicheskaya elektronika, no. 27, L'vov, 1983, 25-27. (RZFZA, 84/5N698).
167. Tsirel'son, V.G.; Korol'kova, O.V.; Ozerov, R.P. (). Calculation of the nonlinear susceptibilities of lithium formate deuterate  $[\text{LiCO}(\text{sub}2)\text{H.D}(\text{sub}2)\text{O}]$  crystals modified by localized bound charges. KRISA, no. 1, 1984, 5-10. (RZFZA, 84/6L992).

## 2. Frequency Conversion

168. Darznek, S.A.; Todua, P.A.; Shestakova, Ye.F. (). Sweep-modulation of laser radiation intensity. OPSPA, v. 56, no. 6, 1984, 1093-1098.
169. Furmanova, N.G.; Razmanova, Z.P.; Soboleva, L.V.; Maslyanitsyn, I.A.; Sigert, G.; Shigorin, V.D.; Shipulo, G.P. (IKAN; IOF). Determining the crystalline structure and evaluating the square-law optical susceptibility of yttrium formate. KRISA, no. 3, 1984, 476-479.



170. Kabanov, I.S.; Klevtsov, P.V.; Kabanova, V.G. (IFSOAN). Optical second harmonic generation in molybdate series compounds. KRISA, no. 3, 1984, 615.
171. Lukinykh, V.F.; Myslivets, S.A.; Slabko, V.V. (IFSOAN). A pulsed neodymium glass laser system for investigating nonlinear optical phenomena in gases. ZTEFA, no.5, 1984, 879-882.
172. Stramska, H. (). Higher harmonics generated by mobile carriers in semiconductors. PSSBB, v. B120, no. 2, 1983, 783-788. (RZFZA, 84/6L1011).
173. Varfolomeyev, A.A. (). Frequency conversion of laser radiation by means of high-energy e-beams. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 16. (RZRAB, 84/5Ye412).

#### 4. Parametric Processes

#### 5. Stimulated Scattering

##### a. Miscellaneous Scattering

174. Shorygin, P.P.; Morozov, V.A. (IOKh). Theory of deformation of light pulses under Rayleigh and Raman scattering by molecules. DANKA, v. 274, no. 3, 1984, 669-672.
175. Skazka, V.S. (SykGU). Dynamic scattering of light and thermal motion of macromolecules in solution. USKHA, no. 5, 1984, 880-895.

##### b. Raman

176. Butylkin, V.S.; Shalyayev, M.F. (IRE). Stimulated Raman scattering in a Gaussian light beam in beam-guide systems. KVEKA, no.6, 1984, 1112-1123.
177. Denisov, V.N.; Mavrin, B.N.; Podobedov, V.B.; Sterin, Kh.Ye. (ISAN). Hyper-Raman scattering by forbidden vibrations in lithium iodate crystals. FTVTA, no. 6, 1984, 1866-1867.
178. Gorelik, V.S.; Khashimov, R.N.; Vidanov, A.P. Mikhaylov, V.N. (FIAN). Raman scattering of light by submicron epitaxial films of silicon. KRSFA, no. 6, 1984, 18-22.

179. Merten, L.; Kotzott, R. (). Excitation of longitudinal optical phonons by stimulated Raman scattering in piezoelectric cubic crystals. PSSBB, v. B120, no. 2, 1983, 481-490. (RZFZA, 84/6L1031).
180. Okladnikov, N.V.; Zverev, V.V.; Brekhovskikh, G.L.; Sokolovskaya, A.I. (FIAN). Saturation of the intensity of stimulated Raman scattering in a quasi-stationary regime. KVEKA, no. 6, 1984, 1105-1112.
181. Vokhnik, O.M.; Zorina, Ye.V.; Odintsov, V.I.; Treneva, Ye.G. (MGU). Time fluctuations in Stokes component radiation of stimulated Raman scattering. VMUFA, no. 3, 1984, 56-59.

c. Brillouin

182. Bokov, N.A.; Andreyev, N.S. (IKhS). Optical scattering by boron oxide for the temperature range 300-900 degrees centigrade. FKSTD, no. 3, 1984, 274-277.
183. Bubis, Ye.L.; Kulagin, O.V.; Pasmanik, G.A.; Shilov, A.A. (IPF). A comparison of stimulated Brillouin scattering efficiencies in opposed directions in a field of complex-conjugate pumpings. KVEKA, no. 6, 1984, 1211-1215.
184. Kagan, V.D.; Pogorel'skiy, Yu.V. (FTI). Stimulated Brillouin scattering and amplification of ultrasound by light during back-scattering. FTVTA, no. 6, 1984, 1735-1738.
185. Natarov, S.Yu.; Shklovskiy, Ye.I. (IOF). A scheme for a four-pass laser amplifier with a stimulated Brillouin scattering mirror. KVEKA, no.6, 1984, 1286-1288.
186. Vlasov, D.V.; Garayev, V.A.; Sidorovich, V.G. (IOF). Excitation of stimulated Brillouin scattering by light fields with a regular transverse structure. KVEKA, no. 6, 1984, 1156-1162.

d. Rayleigh

5. Self-focusing

187. Pogosyan, P.S.; Simonyan, V.G.; Khachatryan, A.M. (). Effect of thermal self-focusing on the time characteristics of a laser amplifier. DANAA, no. 4, 1983, 182-185. (RZFZA, 84/6L1048).

## 6. Acoustic Interaction

188. Andrushko, L.M.; Voznesenskiy, V.A. (). Acoustooptic interactions in polymer films. OPSPA, v. 56, no. 6, 1984, 1056-1058.
189. Antonov, S.N.; Mirgorodskiy, V.I.; Proklov, V.V. (IRE). Acoustooptic device for frequency shift of optical radiation. OTIZD, no. 29, 1983, 890854. (RZRAB, 84/6Ye527).
190. Arkhipov, V.I. (). Optical excitation and recording of surface elastic pulses. Akusticheskiye izmerniya v tverdom tele. Moskva, 1983, 16-19. (RZFZA, 84/5P60).
191. Gel'mukhanov, F.Kh. (). Excitation of sound by light. DANKA, v. 274, no. 2, 1984, 308-311. (RZFZA, 84/5P58).
192. Gurevich, Yu.G.; Mashkevich, O.L. (). Nonequilibrium optical and acoustic phonons in semiconductors. FTPPA, no. 1, 1984, 120-125. (RZFZA, 84/5N280).
193. Karabutov, A.A.; Platonenko, V.T.; Rudenko, O.V.; Chupryna, V.A. (MGU). Direct observation of the formation of a shock front by acoustic waves in a solid. VMUFA, no. 3, 1984, 89-91.
194. Kitayeva, V.F.; Zharikov, Ye.V.; Chisty, I.L. (FIAN). Properties of crystals with a garnet structure. FIAN. Preprint, no. 146, 1984, 46 p.
195. Konstantinov, L.L.; Khinkov, V.P. (). Various optoacoustic phenomena in solids and their application. SUFGA, v. 72-73, 1980(1983), 51-60. (RZFZA, 84/5L424).
196. Kulakov, S.V. (). Signal and noise at the output of an acoustooptic spectrum analyzer. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 54-62.
197. Kuzichkin, A.V. (). Acoustooptic correlation analysis of complex jumping-frequency signals. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 78-82.
198. Kuzichkin, A.V. (). Statistical characteristics of acoustooptic detectors of long-duration pseudorandom signals. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 71-77.

199. Molotok, V.V. (). Instrument function of a real acoustooptic spectrum analyzer. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 63-70.
200. Nesterov, V.V. (SimGU). Acoustooptic measurement of traveling acoustic waves. Dinamicheskiye sistemy, no. 3, KGU, Kiyev, Vishcha shkola, 1984, 116-122.
201. Petrun'kin, V.Yu.; Vodovatov, I.A.; Lipovskiy, A.A. (LPI). Acoustooptic interaction of surface waves in waveguide structures. IVYRA, no. 5, 1984, 655-660.
202. Petrun'kin, V.Yu.; Vodovatov, I.A. (). Theory of the diffraction of light by ultrasound (in isotropic media). IVYRA, no. 12, 1983, 1570-1578. (RZFZA, 84/6L56).
203. Sablikov, V.A.; Sandomirskiy, V.B. (). Photoacoustic effect in semiconductors. PSSBB, v. B120, no. 2, 1983, 471-480. (RZFZA, 84/5N302).
204. Savitskiy, I.V.; Shpotok, O.I.; Matkovskiy, A.O.; Futey, A.V. (). Efficiency of elastooptic interaction in chalcogenide glasses. Fizicheskaya elektronika, no. 27, L'vov, 1983, 64-68. (RZFZA, 84/5L423).
205. Trepera, R.; Cuchy, Z.; Marek, J. (). Acoustooptic modulators. JMkoa, no. 10, 1983, 290-291. (RZFZA, 84/6P136).
206. Vasil'yev, Yu.G. (). Acoustooptic demodulation of radio signals. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 83-91.
207. Vasil'yev, Yu.G. (). Light diffraction by a complex ultrasonic signal. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 92-99.
208. Zharov, V.P. (MVTU). Principles of selective optoacoustic observation of molecules in complex mixtures. ZAKHA, no. 5, 1984, 780-790.
- G. SPECTROSCOPY OF LASER MATERIALS
209. Basov, Yu.G. (). The short-wavelength radiation spectra of pulsed lamps (Review). ZPSBA, v.40, no.6, 1984, 885-904.
210. Basun, S.A.; Kaplyanskiy, A.A.; Feofilov, S.P. (FTI). Observing excitational energy transfer in ruby induced by resonant phonons (29 inverse centimeters). FTVTA, no. 6, 1984, 1808-1811.

## H. ULTRASHORT PULSE GENERATION

211. Dianov, Ye.M.; Karasik, A. Ya.; Mamyshev, P.V.; Onishchukov, G.I.; Prokhorov, A.M.; Stel'makh, M.F.; Fomichev, A.A. (IOF; MFTI). The effective compression of picosecond radiation pulses from a Nd<sup>3+</sup> YAG-laser. KVEKA, no.6, 1984, 1078-1080.
212. Dianov, Ye.M.; Karasik, A.Ya.; Mamyshev, P.V.; Onishchukov, G.I.; Prokhorov, A.M.; Stel'makh, M.F.; Fomichev, A.A. (IOF; MFTI). The picosecond structure of a pumping pulse during stimulated Raman scattering in a single-mode fiber lightguide. ZFPRA, v.39, no.12, 1984, 564-566.
213. Guba, B.S.; Il'in, A.M.; Potapov, S.L.; Sedov, B.M. (). The formation of highly coherent radiation of nanosecond duration. ZPSBA, v.40, no.6, 1984, 931-936.

## J. CRISTAL GROWING

## H. THEORETICAL ASPECTS OF ADVANCED LASERS

214. Afonin, D.G.; Bogomolov, V.G.; Boyarintsev, N.D.; Gorbunov, V.V.; Kozhevnikov, A.V.; Kostiyenko, A.I.; Korolev, A.F. (). Study on a quasi-optic electrodynamic system for free-electron lasers. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 20. (RZRAB, 84/5Ye98).
215. Alferov, D.F.; Bashmakov, Yu.A. (). Effect of the angular spread of the beam on the gain in a free-electron laser. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 10. (RZRAB, 84/5Ye95).
216. Bereznyak, G.L.; Zhurakhovskiy, V.A.; Orlov, N.N. (). Analytical theory of free-electron lasers with a large spread of velocities. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 15. (RZRAB, 84/5Ye97).
217. Bessonov, Ye.G. (). Free-electron lasers. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 8. (RZRAB, 84/5Ye94).

218. Bogdankevich, L.S.; Gelkhviidze, P.K.; Ivanov, V.S.; Krementsov, S.I.; Rayzer, M.D.; Rukhadze, A.A.; Fedotov, A.V. (IOF). Superradiation in an undulator in a double resonance operating mode. IOF. Preprint, no. 151, 1984, 29 p.
219. Fedorov, M.V. (). Nonlinear theory of gain in a Compton laser with noncollinear geometry. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 9. (RZRAB, 84/5Ye24).
220. Ginzburg, N.S. (IPF). The use of incoherent pumping in free electron lasers. PZTFD, no.10, 1984, 584-588.
221. Gruzina, G.A.; Kozhevnikov, A.V. (). Optimization of the parameters of free-electron lasers in a combined magnetic field. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 13. (RZRAB, 84/5Ye100).
222. Serov, A.V. (). Effect of inhomogeneities in the e-m wave field and in the undulator on gain in a free-electron laser. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 11. (RZRAB, 84/5Ye96).
223. Sobel'man, I.I.; Vinogradov, A.V. (FIAN). Problem of extreme UV and X-ray lasers. FIAN. Preprint (in English), no. 150, 1984, 33 p.
224. Ternovskiy, V.N.; Khapayev, A.M. (). Particle motion in free-electron laser systems. Moshchnyye generatory i usiliteli na relyativistskikh elektronnykh potokakh. CVSRVELe, 4th, Moskva, 24-26 Jan 1984. Tezisy dokladov. Moskva, 1984, 26. (RZRAB, 84/5Ye99).
225. Tikhonov, V.N. (IAE). Electron radiation in a spiral undulator, allowing for inhomogeneity of the magnetic field. IAE. Preprint, no. 3841/1, 1983, 20 p. (RZFZA, 84/5L842).
- L. GENERAL LASER THEORY
226. Apanasevich, P.A.; Nizovtsev, A.P. (). Quasi-energy method in the theory of optical collisional transitions. ZPSBA, v. 38, no. 1, 1983, 5-21. (RZFZA, 84/6L816).

227. Auzin'sh, M.P. (). Solution of equations of motion of polarized moments for high values of the angular moment. LZFTA, no. 1, 1984, 9-15. (RZFZA, 84/6L821).
228. Auzin'sh, M.P.; Ferber, R.S. (). Evidence of relaxation of polarized moments of the ground state of diatomic molecules in the kinetics of the transition process. LZFTA, no. 1, 1984, 16-20. (RZFZA, 84/6L822).
229. Berik, Ye.B. (IFANEst). Laser with frequency-tunable radiation. OTIZD, no. 20, 1984, 910100.
230. Betin, A.A.; Dyatlov, A.I.; Kulagina, S.N.; Kulagin, S.V.; Milovskiy, N.D.; Sherstobitov, V.Ye. (IPF). Evaluating the energy characteristics of a two-pass amplifier. IVYRA, no. 5, 1984, 557-564.
231. Bykov, V.P. (IOF). Twenty-five problems on the interaction of radiation with matter. IOF. Preprint, no. 160, 1984, 5 p.
232. Bykov, V.P.; Shepelev, G.V. (IOF). Correlation properties of optical fields. IOF. Preprint, no. 149, 1984, 14 p.
233. Czechowicz, R. (). Operating modes of solid-state lasers with a nonlinear fast reabsorbing dye in the resonator. BWATA, no. 10, 1983, 79-84. (RZRAB, 84/5Ye136).
234. Nakhodkin, N.G.; Levitskiy, S.M. (KGU). Development of research in radiophysics and electronics at the Radiophysics Department of Kiev University. KGU. Vestnik. Fizika, no. 25, 1984, 20-33.
235. Nenchev, M.N. (). Dual-wave tunable laser. Author's certificate Bulgaria, no. 32702, 30 Sep 1982. (RZRAB, 84/5Ye193).
236. Optical research. FIZSA, no. 1, 1984, 18-20. (RZFZA, 84/5A91).
237. Skorobogatov, B.S.; Usoskin, A.I. (). Amplification of the scattered fluxes of stimulated radiation in laser rods with high gain coefficients. OPSPA, v. 56, no. 6, 1984, 1099-1103.
238. Spikhal'skiy, A.A. (IOF). Background conversion efficiency of modes in integrated optical devices. IOF. Preprint (in English), no. 148, 1984, 23 p.

## II. LASER APPLICATIONS

### A. BIOLOGICAL EFFECTS

239. Kupch, Ya.A.; Eninya, G.I.; Chernyakov, V.A.; Raubishko, B.I.; Kadysh, S.A.; Ayde, Kh.B. (RMI). Method for joining blood vessels. OTIZD, no. 18, 1984, 1091933.
240. Solyanik, L.B.; Lemeshko, I.N. (RGU). Structural and functional change in the epiphysis of rats during laser stimulation of the reproductive system. VINITI. Deposit, no. 792-84, 8 Feb 1984, 10 p. (DERUD, 5/84, 350).

### B. COMMUNICATIONS SYSTEMS

241. Abramov, V.V.; Bazarnyy, Ye.M.; Bazarov, Ye.N.; Grigor'yants, V.V.; Gulyayev, Yu.V.; Zhabotinskiy, M.Ye.; Kitayev, A.Ye.; Levikin, L.V.; Morshnev, S.K.; Potapov, V.T.; Sokolov, A.V.; Sosnin, V.P.; Frantsesson, A.V. (IRE). Development of fiberoptic communications systems and sensors. Problemy sovremennogo radiotekhniki i elektroniki. Moskva, 1983, 121-139. (RZRAB, 84/5Ye326).
242. Aleshin, G.V.; Urvachev, V.I.; Prytkov, V.I. (). Synthesis of laser communication lines with ultranarrow directional patterns. Rasprostraneniye i difraktsiya radiovoln v millimetrovom i submillimetrovom diapazonakh. Kiyev, Naukova dumka, 1984, 84-91.
243. Alishev, Ya.V. (). Digital laser information systems for local computer networks using polarization effects for improving noise rejection. Organizatsiya protsessov obmena informatsii v lokal'nykh vychislitel'nykh setyakh SAPR/ASNI. Minsk, 1983, 141-148. (RZRAB, 84/6Ye401).
244. Andriyesh, A.M.; Bol'shakov, O.V.; Lungu, D.N.; Ponomar', V.V.; Smirnova, A.S.; Fedotova, N.D. (IPFANM). Absorption of radiation in the 1-8  $\mu\text{m}$  range in glassy arsenic sulfide fibers. KVEKA, no. 6, 1984, 1266-1268.
245. Andriyesh, A.M.; Bykovskiy, Yu.A.; Borodakiy, Yu.V.; Kozhin, A.F.; Mironos, A.V.; Smirnov, V.L.; Ponomar', V.V. (). Stability of chalcogenide glassy semiconductor optical fibers under conditions of irradiation by large doses of neutrons. PZTFD, no. 9, 1984, 547-549.



246. Anisimov, V.Yu.; Borisov, E.V. (). Noise rejection in optical communication lines at illegible levels of signal and noise. RATEA, no. 1, 1984, 73-75. (RZRAB, 84/5Ye335).
247. Ayunts, Yu.Kh.; Belovolov, M.I.; Dianov, Ye.M.; Tsibulya, A.B. (YeGU). Calculating the matching of semiconductor lasers with lightguides. YeGU. Uchenyye zapiski. Yestestvennyye nauki, no. 2, 1983, 62-68. (RZFZA, 84/6L678).
248. Bryukhanov, A.N.; Mikhaylov, V.G.; Popov, V.I.; Rezvov, V.A.; Yudin, L.I.; Gleybman, E.M. (). Electrooptic module for transmitting discrete information. CVSUZCha, 8th, Protvino, 19-21 Oct 1982. Trudy. Vol. 2. OIYaI. Dubna, 1983, 320-323. (RZFZA, 84/6V435).
249. Bykov, A.M.; Volyar, A.V.; Gnatovskiy, A.V.; Savchenko, V.N. (IFANUK; SimGu). Holographic correction of the polarization of radiation emitted from fiber lightguides. UFZHA, no. 6, 1984, 826-829.
250. Chinybayev, K.D. (). Methods for improving the efficiency of coupling semiconductor laser radiation into optical fibers. Golograficheskiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 89-100. (RZRAB, 84/5Ye290).
251. Darek, B. (). Laser electroluminescence diode for lightguides. Patent Poland, no. 119119, 25 Jul 1983. (RZRAB, 84/6Ye353).
252. Derenovskiy, M.V.; Lysak, V.V.; Shmarev, Ye.K. (). Electron-beam thermomagnetic recording. ZTEFA, no.6, 1984, 1189-1191.
253. Gan'shin, V.A.; Korkishko, Yu.N. (). Optical properties of ion-exchange lightguides in X- and Y-cut LiNbO3 crystals. ZTEFA, no. 2, 1984, 383-395.
254. Glatzel, K.P.; Behr, B. (). Device for ordered distribution of lightguides in communications systems. Patent GDR, no. 203408, 19 Oct 1983. (RZRAB, 84/6Ye462).
255. Gozman, N.Ya.; Semenov, N.A. (). Losses in lightguides due to microscopic bends. RATEA, no. 2, 1984, 79-82. (RZFZA, 84/6L35).
256. Habermajer, I. (). Laser diodes in optical information transmission. HIRAA, no. 11, 1983, 509-516, 543, 544, 3. (RZRAB, 84/6Ye354).

257. Kabanova, S.A. (). Economic aspects in designing lightguide systems for transmitting information. RATEA, no. 2, 1984, 77-78. (RZFZA, 84/6L642).
258. Kalosha, V.P.; Khapalyuk, A.P. (). Modal birefringence in parabolic fibers with elliptic distortions of the core (vector theory). RAELA, no. 2, 1984, 219-227.
259. Kaplan, J.; Ruzickova, A. (). Development of optoelectronics and its application in the national economy [in Czech]. Ustřed vedecké, technické a ekonomické informace, no. SIVO-1858, 1983, 57 p. (RZRAB, 84/5Ye307).
260. Khrykin, V.T.; Lukin, I.A.; Sokhranskiy, S.S.; Liferenko, V.D.; Markov, Yu.V. (). Complex of equipment for optical communications lines. Sredstva svyazi, no. 4, 1983, 41-45. (RZRAB, 84/6Ye372).
261. Krawczack, L. (). Calculating the coupling coefficients of direct axially coupled lightguides. Nachrichtentechnik-Elektronik, no. 1, 1984, 13-16. (RZRAB, 84/5Ye249).
262. Labs, J.; Scheel, W. (). Method for improving the timing of an electric arc [for welding fiber lightguides]. Patent GDR, no. 202948, 5 Oct 1983. (RZRAB, 84/5Ye438).
263. Linchevskiy, I.V.; Stefanovich, Yu.T.; Shmarev, Ye.K. (KPIA). Optical processing of signals from a linear antenna array based on fiber optic sensors. IVUZB, no. 5, 1984, 51-56.
264. Makritskiy, Yu.V.; Samoilyukovich, V.A.; Spetsian, Yu.V. (). Limit operating conditions for heterolasers in fiberoptic communication lines. Organizatsiya protsessov obmena informatsii v lokal'nykh vychislitel'nykh setyakh SAPR/ASNI. Minsk, 1983, 149-153. (RZRAB, 84/6Ye355).
265. Pal, P.; Plavak, M. (). Evaluation of the quality of processing of ends of fiberoptic lightguides for information transmission. JMkoa, no. 9, 1983, 251-253. (RZRAB, 84/6Ye324).
266. Petrun'kin, V.Yu.; Kotov, O.I.; Filippov, V.N. (LPI). The phenomenon of the suppression of modal noise in multimode fiber lightguides. ZTEFA, no.5, 1984, 883-887.

267. Plotnichenko, V.G.; Sysoyev, V.K. (IOF). Impurity absorption of chalcogenide glasses in a region of CO laser radiation. IOF. Preprint, no. 224, 1984, 9 p.
268. Porokhov, O.N. (). Bipulse regenerators for optical communications systems. RATEA, no. 2, 1984, 3-8. (RZRAB, 84/5Ye352).
269. Romaniuk, R.; Ciepielowski, T.; Warmenski, K. (). Communications systems in large health service facilities. PZTKA, no. 9, 1983, 261-263, 242, 271. (RZRAB, 84/6Ye400).
270. Romaniuk, R.; Jedrzejewski, K.; Panta, P. (). Comparative studies on radiation from fiber lightguides. EKNTB, no. 9, 1983, 18-22, 1, 2. (RZRAB, 84/6Ye280).
271. Romanov, Yu.I. (). Multichannel fiberoptic communication lines for systems for monitoring and control of ion sources. CVSUZCha, 8th, Protvino, 19-21 Oct 1982. Trudy. Vol. 2. OIYaI. Dubna, 1983, 352-354. (RZFZA, 84/6V436).
272. Shatalov, F.A. (). Reducing the temperature instability of optical fiber lightguide lines. Proyektirovaniye elementov i uzlov radiopriyemnykh traktov. Moskva, 1983, 34-40. (RZRAB, 84/6Ye439).
273. Shatalov, F.A. (). Transmission of a microwave envelope of radiation over a single-mode fiber lightguide. Proyektirovaniye elementov i uzlov radiopriyemnykh traktov. Moskva, 1983, 12-24. (RZRAB, 84/6Ye284).
274. Shatalov, F.A.; Dokhikyan, R.G.; Myznikov, Yu.F. (). Effect of bends and stresses in graded-index multimode lightguides on the harmonic envelope of radiation. Proyektirovaniye elementov i uzlov radiopriyemnykh traktov. Moskva, 1983, 25-33. (RZRAB, 84/6Ye285).
275. Smolenskiy, G.A.; Mironov, S.A.; Ageyev, A.N.; Lemanov, V.V.; Sukharev, B.V.; Mokrushina, Ye.V.; Shaplygina, T.A. (). Propagation and conversion of optical radiation in planar ferroelectric lightguides. Segnetoelektriki. Rostov-na-Donu, 1983, 31-54. (RZFZA, 84/5L67).
276. Solodov, A.A. (). Study on the quality of linear filtering of analog optical signals. RATEA, no. 1, 1984, 75-77. (RZRAB, 84/5Ye392).

277. Sorochkin, G.L.; Tsurkina, R.V.; Davydov, A.V. (). Hermetic pass-through coupler for fiber lightguides (and its variants). OTIZD, no. 40, 1983, 1051482. (RZRAB, 84/6Ye325).
278. Tarkov, V.A.; Tishchenko, Yu.N.; Trubetskoy, A.V.; Shipov, P.M. (). An acousto-optical modulator with opposed acoustical beams and a single-axis optically active crystal. AVMEB, no.12, 1984, 43-49.
279. Vasil'yev, Yu.G. (). Effect of acoustic damping on the output signal of an acoustooptic filter for compressing a linearly frequency-modulated signal. RATEA, no. 2, 1984, 43-45. (RZFZA, 84/5P165).
280. Volkov, V.A.; Korol'kov, V.I. (UDN). Development of lithium niobate planar acoustooptic devices. Konferentsiya molodykh uchenykh UDN, 6th, Moskva, 17-21 Mar 1983. Materialy. Chast' 1. VINITI. Deposit, no. 1316-84, 5 Mar 1984, 53-56. (RZFZA, 84/6L680).
281. Voronenko, V.P. (). Digital optical signal retranslator. OTIZD, no. 37, 1983, 1046951. (RZRAB, 84/5Ye355).
282. Yeremin, N.M. (). Sine-square and square-wave pulse shaper. Author's certificate USSR, no. 1031003, 27 Apr 1982. (cited in TKTEA, no. 5, 1984, 48).
283. Zargar'yants, M.N.; Kurnosov, A.B.; Mezin, Yu.S. (). Features of injection superluminescence for a binary heterostructure in the temperature interval from 240 to 420 K. ZTEFA, no.6, 1984, 1207-1208.
284. Zavitnevich, Yu.V.; Kozlov, A.A.; Mirovitskaya, S.D. (). Control of the external diameter of optical fibers by comparison of diffraction patterns. RATEA, no. 2, 1984, 82-86. (RZRAB, 84/5Ye394).
285. Zavitnevich, Yu.V.; Kozlov, A.A.; Mirovitskaya, S.D. (). Instrument for monitoring the diameters of lightguides in comparison with a standard. PRTEA, no. 1, 1984, 212-215. (RZFZA, 84/6L681).

## C. BEAM PROPAGATION

### 1. Theory

286. Adamashvili, G.T.; Zviadadze, M.D. (). Self-induced transparency during excitation of forbidden optical transitions. OPSPA, v. 56, no. 1, 1984, 188-190. (RZFZA, 84/5L814).
287. Bykovskiy, Yu.A.; Barachevskiy, V.A.; Borodakiy, Yu.V.; Kozenkov, V.M.; Maymistov, A.I.; Smirnov, V.L.; Shulev, Yu.V. (MIFI). Anisotropic diffraction-grating structures for integrated optical circuits. KVEKA, no.6, 1984, 1255-1257.
288. Konstantinovich, A.V.; Fortuna, V.V. (). Theory of radiation from a system of noninteracting charges moving in a permanent homogeneous magnetic field in a vacuum. IVUFA, no. 12, 1983, 102-104. (RZFZA, 84/6L828).
289. Kravtsov, Yu.A.; Orlov, Yu.I. (). Caustics, catastrophes and wave fields. UFNAA, v. 141, no. 4, 1983, 591-627. (RZFZA, 84/5L11).
290. Mirzayev, A.T. (). Study on the statistical characteristics of modulated coherent signals in the presence of additive noise. Radiofizika i spektroskopiya. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 2-9. (RZRAB, 84/6Ye650).
291. Ponomarev, G.A.; Tel'pukhovskiy, Ye.D. (). Coherence function of single-scattered waves. VINITI. Deposit, no. 529-84, 30 Jan 1984, 13 p. (RZFZA, 84/5L25).
292. Pozhela, Yu.K.; Tolutis, R.B.; Yankauskas, Z.K. (Vil'nISI). Excitation of Gaussian helicon beams in a magnetized solid plasma. IVYRA, no. 6, 1984, 788-794.
293. Smirnov, V.I. (). Coherence of light. Sbornik nauchno-metodicheskikh statey po fizike, no. 10, Moskva, 1984, 53-69. (RZFZA, 84/5A89).
294. Vertiy, A.A.; Derkach, V.N. (). Fourier analysis of the spatial structure of fields in quasi-optics. CVShSRMS, 1st, 10-17 Feb 1982. Trudy. Moskva, 1983, 94-98. (RZRAB, 84/5Ye23).
295. Voyshvillo, N.A.; Shcherbakova, N.I.; Protsyshin, I.V. (GOI). Degree of coherence of laser radiation propagating through optically scattering glass. OPMPA, no. 5, 1984, 1-4.

296. Yepifantsev, B.N.; Morozova, N.I. (ToPI). Model for the reflection of optical radiation by moist disperse materials. VINITI. Deposit, no. 872-84, 13 Feb 1984, 50 p. (RZFZA, 84/5L10).

## 2. Propagation in the Atmosphere

297. Aksenov, V.P.; Banakh, V.A.; Chen, B.N. (). The dispersion of image displacements of objects for lidar in a turbulent atmosphere. OPSPA, v.56, no.5, 1984, 864-868.
298. Aksenov, V.P.; Banakh, V.A.; Buldakov, V.M.; Mironov, V.L.; Tikhomirova, O.V. (IOA). Intensity fluctuations during the focusing of reflected light in a turbulent atmosphere. KVEKA, no.5, 1984, 1022-1026.
299. Armand, N.A.; Grigor'yevskiy, V.I.; Lomakin, A.N. (). Effect of averaging of eikonal fluctuations on the accuracy of optical rangefinders. IZTEA, no. 12, 1983, 24-25. (RZRAB, 84/5Ye506).
300. Balandin, S.F.; Kopytin, Yu.D.; Koryukin, V.I.; Svishchenko, V.V. (). Statistical characteristics of intense laser pulses during propagation in atmospheric aerosols. Part 1. Derivation of original equations. VINITI. Deposit, no. 822-84, 9 Feb 1984, 29 p. (RZFZA, 84/6L783).
301. Banakh, V.A.; Tikhomirova, O.V. (). The dispersion and spatial intensity correlation of laser beams reflected in a turbulent atmosphere. OPSPA, v.56, No.5, 1984, 857-863
302. Boronoyev, V.V.; Dashinimayev, V.D.; Zandanova, G.I.; Poplaukhin, V.N.; Trubacheyev, E.A. (BIYeN). Fluctuations in the intensity of a focused laser beam during reflection in a turbulent atmosphere. IVYRA, no. 6, 1984, 810-812.
303. Borsan, D.; Stefan, S. (). Determination of the intrinsic parameters of fog by the average values of attenuation of laser radiation [in English]. ABFZA, v. 32, 1983, 87-90. (RZFZA, 84/6L1142).
304. Bychkov, S.I.; Rumyantsev, K.Ye.; Firsov, V.S. (LETI). Effect of atmospheric turbulence on the probability characteristics of an optical radiation detector. LETI. Trudy, no. 333, 1983, 25-28. (RZRAB, 84/5Ye471).
305. Dolgiy, S.I.; Khmel'nitskiy, G.S. (IOA). Lidar for observing petroleum impurities and chlorophyll in the water. IVUFA, no. 6, 1984, 8-11.

306. Khadzhiyskiy, A.I. (). Determination of the motion of the earth's poles by highly accurate laser observations. Ispol'zovaniye nablyudeniya iskusstvennykh sputnikov zemli v geodezii i geofizike. Astrovet. Nauchnyye informatsii, no. 55, 1982, 92-97.
307. Kostin, B.S.; Naats, I.E. (). Study on atmospheric aerosols by multifrequency laser probing. Part 1. Theory of the method and fundamentals of remote microstructural analysis of polydisperse aerosol systems. VINITI. Deposit, no. 1566-84, 21 Mar 1984, 63 p. (RZFZA, 84/6L796).
308. Kurbasova, G.S.; Kurbasov, V.V. (). Optimization of the process of discrimination of weak optical signals during laser ranging of satellites. Ispol'zovaniye nablyudeniya iskusstvennykh sputnikov zemli v geodezii i geofizike. Astrovet. Nauchnyye informatsii, no. 55, 1982, 17-26.
309. Lebed'ko, Ye.G. (). Estimating the parameters of the signal in optical radars under conditions of varying background illumination. Optiko-elektronnyye pribory v kontrol'no-izmeritel'noy tekhnike. Leningrad, 1983, pp not given. (RZRAB, 84/6Ye569).
310. Levin, V.A.; Netesov, V.V.; Starik, A.M. (). A numerical investigation of the propagation of a pulse of radiation at 10.6 micron wavelength through an absorbing medium. ZPMFA, no. 3, 1984, 14-19.
311. Masevich, A.G.; Kurbasova, G.S.; Mazurov, V.A.; Shtirberg, L.S. (). Experimental measurements of the energy of signals reflected from satellites. Ispol'zovaniye nablyudeniya iskusstvennykh sputnikov zemli v geodezii i geofizike. Astrovet. Nauchnyye informatsii, no. 55, 1982, 13-16.
312. Matveyev, D.T. (). Calibration of the detector for the Intercosmos laser rangefinder. Ispol'zovaniye nablyudeniya iskusstvennykh sputnikov zemli v geodezii i geofizike. Astrovet. Nauchnyye informatsii, no. 55, 1982, 7-12.
313. Matveyev, D.T.; Chepurnov, B.D. (). Modernization of the first generation Intercosmos laser rangefinder at the Zvenigorod satellite tracking station of the Astronomy Council of the Academy of Sciences USSR. Ispol'zovaniye nablyudeniya iskusstvennykh sputnikov zemli v geodezii i geofizike. Astrovet. Nauchnyye informatsii, no. 55, 1982, 3-6.

314. Matviyenko, G.G. (IOA). The error of wind velocity correlation meters caused by variation of the transparency of the atmospheric layer being probed. IFAOA, no.5, 1984, 440-443.
315. Neumyvakin, Yu.K.; Perskiy, M.I. (). Effect of the environment on the accuracy of measurements by automated laser geodetic systems. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 56-96.
316. Neumyvakin, Yu.K.; Perskiy, M.I. (). Technology of control measurements, allowing for the effect of the curvature of the earth and external (meteorological) factors. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 102-109.
317. Pkhalagov, Yu.A.; Cherkasova, T.G. (IOA). The chemical composition of aerosols in coastal haze. IFAOA, no.5, 1984, 388-393.
318. Portasov, V.S. (NIIP). Possibility of using automated lidars for airport meteorology. NIIP. Trudy, no. 46, 1984, 41-45.
319. Prishivalko, A.P. (). Heating of large water droplets by 1.06 um laser radiation. VBSFA, no. 1, 1984, 51-56. (RZFZA, 84/6L1073).
320. Zakharchenko, S.V.; Sintyurin, G.A.; Skripkin, A.M. (IEM). An investigation of the conditions for the occurrence of a laser spark. ZTEFA, no.6, 1984, 1095-1100.
321. Zakharov, Yu.N.; Kosoburd, T.P.; Sorokin, Yu.M. (GGU). Dual longwave shadow diagnostics of the region of low-threshold optical breakdown in a gas dispersion medium. ZTEFA, no. 5, 1984, 969-971.
322. Zuyev, V.Ye. (). Nonlinear optics of the atmosphere. IANFA, no. 2, 1983, 2-4. (RZFZA, 84/6L780).

### 3. Propagation in Liquids

323. Yegerev, S.V.; Naugol'nykh, K.A.; Pashin, A.Ye.; Uchastnov, V.N. (AKIN). Thermo-optic sound emitter in a two-phase medium. AKZHA, v. 30, no. 3, 1984, 310-317.



#### 4. Adaptive Optics

324. Arutyunyan, V.M.; Agadzhanyan, S.A.; Muradyan, A.Zh.; Papazyan, T.A. (). Study on optimal conditions for wavefront reversal in the picosecond region. ZPSBA, v. 40, no. 5, 1984, 808-812.
325. Balakshiy, V.I.; Nikanorova, Ye.A.; Parygin, V.N. (MGU). Phase conjugation in Bragg diffraction. VMUFA, no. 6, 1983, 70-75. (RZFZA, 84/5L12).
326. Bunkin, F.V.; Vlasov, D.V.; Kravtsov, Yu.A. (). Wavefront reversal in acoustics. Obrashcheniye volnovogo fronta izlucheniya v nelineynykh sredakh. IPF. Gor'kiy, 1982, 63-90. (RZFZA, 84/5P24).
327. Kovalev, V.I.; Musayev, M.A.; Fayzullov, F.S. (FIAN). Reflection from degenerate four-wave interaction in InAs and InSb at 10.6 um. FIAN. Preprint, no. 122, 1984, 41 p.
328. Kryukov, V.I.; Rodionov, A.K.; Sergeyev, P.V.; Sychev, V.V. (GOI). Study on an automatic stabilization system for composite mirrors of an adaptive telescope. OPMPA, no. 6, 1984, 1-4.
329. Mamayev, A.V.; Mel'nikov, N.A.; Pilipetskiy, N.F.; Sudarkin, A.N.; Shkunov, V.V. (IPMe). Wavefront reversal at a semiconductor surface during plasma reflection. ZETFA, v. 86, no. 1, 1984, 232-241.
330. Mush, B.S. (). Synthesis of a quasi-holographic system which is adaptable to a reflecting surface. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 24-28.
331. Polovinkin, A.V.; Saichev, A.I. (). Wave reflection from a wavefront-reversing mirror in a medium with large-scale mobile inhomogeneities. RAELA, no. 2, 1984, 193-206.
332. Vorontsov, M.A.; Kudryashov, A.V.; Nazarkin, S.I.; Shmal'gauzen, V.I. (MGU). A flexible mirror for adaptive optical beam-forming systems. KVEKA, no. 6, 1984, 1247-1249.
- D. COMPUTER TECHNOLOGY
333. Astaf'yev, V.B. (). Functional possibilities of optical feedback devices. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 47-53.

334. Mokhun', I.I.; Protasevich, V.I. (). Method for obtaining matching optical filters for selected Fourier spectrum frequencies. PRTEA, no. 1, 1984, 175-177. (RZFZA, 84/6L651).
335. Vanyushev, B.V.; Volkov, A.V.; Gibin, I.S.; Dombrovskiy, V.A.; Dombrovskiy, S.A.; Mantush, T.N.; Pen, Ye.F.; Pechurkin, V.I.; Polivanov, V.A.; Potapov, A.N.; Tverdokhlev, P.Ye.; Chernyshev, A.I.; Chernyshev, L.F. (). A device for storing and reading digital data in a holographic archival memory system. AVMEB, no. 3, 1984, 19-26.
336. Vovk, Yu.V.; Tverdokhleb, P.Ye.; Shchepetkin, Yu.A. (). Methods for the rapid optical recording of binary data (review). AVMEB, No.3, 1984, 3-12.
337. V'yukhina, N.N.; Litvintseva, A.P.; Mantush, T.N.; Selikhova, Ye.S.; Chernyshev, L.F. (). Program facilities for investigating, debugging and testing a holographic memory. AVMEB, no.3, 1984, 26-32.

E. HOLOGRAPHY

338. Afyan, V.V. (). Holographic solar radiation concentrators. Solnechnaya fotoelektricheskaya energiya. Ashkhabad, 1983, 215-221. (RZRAB, 84/6Ye776).
339. Akayev, A.A.; Alymkulov, S.A.; Zhumaliyev, K.M.; Kutanov, A.A.; Nurkamilov, A. (). Universal device for controlling the hologram recording process on photothermoplastic carriers. Golograficheskiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 20-38. (RZRAB, 84/5Ye689).
340. Akkozov, A.D.; Zhuravlev, O.V. (). Refinement of the parameters of binary hologram coding and its effect on the quality of the reconstructed image. Golograficheskiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 45-50. (RZRAB, 84/5Ye700).
341. Baehr, J.; Schwind, A.E.; Pose, R.A. (). Image reconstruction and processing for holographic bubble chamber photographs. Bild und Ton, no. 1, 1984, 19-22,32. (RZRAB, 84/5Ye712).

342. Bazhenov, M.Yu.; Barabash, Yu.M.; Grin'ko, D.A.; Zabolotnyy, N.G.; Kuvshinskiy, N.G.; Nakhodin, N.G.; Sokolov, N.I.; Teologov, V.V.; Chuprin, N.G. (KGU). Geographic method for studying and monitoring photoelectric properties of photothermoplastic materials based on polymer semiconductors. OTIZD, no. 16, 1984, 1089549.
343. Blok, A.A.; Vanyushev, B.V.; Volkov, A.V.; Gibin, I.S.; Kotenko, V.P.; Mantush, T.N.; Pen, Ye.F.; Potapov, A.N. (). A device for the automatic recording of matrices of digital data holograms. AVMEB, no.3, 1984, 13-19.
344. Borzov, S.M.; Potaturkin, O.I. (). The use of semiconductor lasers in holographic correlators. AVMEB, no.3, 1984, 98-101.
345. Bykovskiy, Yu.A.; Barachevskiy, V.A.; Borodakiy, Yu.V.; Kozenkov, V.M.; Smirnov, V.L.; Shulev, Yu.V. (MIFI). An investigation of organic photochromic materials for recording waveguide programs. KVEKA, no.6, 1984, 1250-1253.
346. Denisyuk, Yu.N.; Gurikov, V.A. (GOI; IIYeiT). Development of holography as a new scientific discipline. PRIRA, no. 5, 1984, 54-61.
347. Dyushenbiyev, N.; Kerimkulov, T. (). Synthesis of binary phase holograms and study on their parameters by computer modeling. Introduction. Golograficheskkiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 38-45. (RZRAB, 84/5Ye690).
348. Garmash, V.Yu.; Lobarev, A.S. (). Demonstration of hologram production in school. FIZSA, no. 1, 1984, 52-53. (RZFZA, 84/5A159).
349. Gurari, M.L.; Mamakina, S.V.; Rymarev, V.P.; Sakharov, V.K.; Tikhonov, V.M. (). Device for photo-processing and observing holograms at the location of exposure. OTIZD, no. 24, 1984, 988081.
350. Ignat'yev, N.K. (NIKFI). Producing 3D holograms with depth compression. TKTEA, no. 6, 1984, 5-10.
351. Ignat'yev, N.K.; Zhirkov, L.F.; Kosodurov, S.I. (NIKFI). Stroboscopic distortions in superimposed synthetic holograms. NIKFI. Deposit, no. 35kt-D84, 1984. (cited in TKTEA, no. 6, 1984, 6).
352. Komarov, V.M.; Telyatnikov, V.I. (). Holographic methods for forming acoustic images. ZRBEA, no. 1, 1984, 71-80. (RZFZA, 84/5P167).

353. Mamayev, A.V.; Pilipetskiy, N.F.; Shkunov, V.V. (IPMe). An experimental investigation of the angular selectivity of stimulated Brillouin scattering holograms. KVEKA, no.6, 1984, 1277-1280.
354. Mukimov, K.M.; Rakhimov, D.A.; Tron'ko, V.D. (TashGU). Transformation of phase discrepancies between two beams during reversal of the polarization plane of laser radiation. IVUFA, no. 6, 1984, 109-110.
355. Mush, B.S. (). Principle of "equal observation" and economic algorithms for processing of quasi-holographic pulsed Doppler system signals. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 16-23.
356. Oparin, A.N.; Potaturkin, O.I.; Fel'dbush, V.I.; Shipov, P.M. (). A holographic intensity correlator with a PRIZ photoelectric controlled transparency. AVMEB, no. 3, 1984, 57-61.
357. Peshko, I.I.; Khizhnyak, A.I. (IFANUk). Holographic visualization of CO<sub>2</sub> laser radiation. IFANUk. Preprint, no. 8, 1984, 23 p.
358. Rubanov, A.S.; Tanin, L.V.; Vasil'yeva, L.V.; Kalinin, A.N. (IFANB). Method for forming images. OTIZD, no. 23, 1984, 1099310.
359. Trofimov, G.S.; Stepanov, S.I. (FTI). The effect of the electrical development of a hologram in a Bi(sub12)SiO(sub20) crystal. PZTFD, no.11, 1984, 669-673.
360. Vanyushev, B.V.; Orlov, Ye.M.; Tarkov, V.A. (). A device for the automatic frequency control of a beam. AVMEB, no.3, 1984, 105-108
361. Vlasov, N.G.; Presnyakov, Yu.P.; Savilova, Yu.I. (). Reconstruction of undistorted enlarged holographic images in higher diffraction orders. Golograficheskiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 50-55. (RZRAB, 84/5Ye703).
362. Yefremov, E.I.; Chogoshvili, I.G.; Dorfman, A.G. (IGMANGruz). Visualizing the distribution of seismic energy in an explosion around a screening cavity. SAKNA, no. 3, 1984, 501-504.
363. Yelkhov, V.A. (IOAN). Effect of the coherence of semiconductor injection laser radiation on Fourier hologram reconstruction. VINITI. Deposit, no. 1061-84, 23 Feb 1984, 14 p. (DERUD, 6/84, 266).

364. Yerokhovets, V.K. (). A method for the successive reproduction of microholograms with the formation of two information channels. AVMEB, no.3, 1984, 101-103.
365. Zimmer, F. (). Demonstration of surface acoustic waves by holography with frequency shift. Nachrichtentechnik-Elektronik, no. 1, 1984, 11-12. (RZRAB, 84/5Ye706).
366. Zinov'yev, Yu.S.; Pasmurov, A.Ya. (). Use of holographic principles for analyzing synthetic-aperture radars. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 3-15.
367. Zvonkov, Yu.G.; Maslov, G.V.; Dorfman, A.G. (IGMANGruz; KazPI). Visualizing the explosion process in a solid using a holographic method during sector loading of the blast hole. SAKNA, no. 3, 1984, 505-508.

F. LASER-INDUCED CHEMICAL REACTIONS

368. Akramova, D.Sh.; Alimov, D.T.; Medvedeva, V.K.; Preobrazhenskiy, M.A.; Tursunov, M.A.; Khabibullayev, P.K. (). Nonlinear ionization of a barium atom by laser radiation at 9395 cm(sup -1). OPSPA, v. 56, no. 6, 1984, 987-990.
369. Alimov, D.T.; Yedvabnyy, I.V.; Luk'yanchuk, B.S.; Khabibullayev, P.K. (IOF). Bistability during laser heating of chemically active media. KVEKA, no.5, 1984, 923-932.
370. Alkhazov, G.L.; Barvakh, A.Ye.; Berlovich, E.Ye.; Denisov, V.P.; DERNYATIN, A.G.; Ivanov, V.S.; Zherikhin, A.N.; Kompanets, O.N.; Letokhov, V.S.; Mishin, V.I.; Fedoseyev, V.N. (LIYaF). Measuring of optical isotopic shifts in radioactive atoms in the IRIS laser-nuclear mass-separator. LIYaF. Preprint, no. 908, 1983, 60 p. (RZFZA, 84/5L110).
371. Bazilevskiy, M.V.; Ryaboy, V.M. (NIFKHI). The quantum dynamics of the multi-channel decay of a model asymmetric three-atom system. DANKA, v.276, no. 2, 1984, 391-394.
372. Bekov, G.I.; Maksimov, G.A.; Nikogosyan, D.N.; Radayev, V.N.; (ISAN). Increase of the selectivity of laser photoionization analysis during the two-pulse action of an electric field on Rydberg atoms. KVEKA, no. 6, 1984, 1262-1264.

373. Bondar', I.I.; Delone, N.B.; Suran, V.V. (IOF). Formation of doubly charged ions from nonlinear ionization of barium atoms by radiation at 18800-18950 inverse centimeters. IOF. Preprint, no. 162, 1984, 12 p.
374. Bondar', I.I.; Delone, N.B.; Zapesochnyy, I.P.; Suran, V.V. (IOF). Multiphoton ionization of strontium atoms. IOF. Preprint, no. 133, 1984, 33 p.
375. Bunkin, F.V.; Kirichenko, N.A.; Luk'yanchuk, B.S. (IOF). Thermochemical bistability and chemical phase transitions stimulated by laser radiation. KVEKA, no.6, 1984, 1183-1198.
376. Bunkin, F.V.; Luk'yanchuk, B.S.; Shafeyev, G.A. (IOF). The selective control of electrochemical processes by means of laser radiation. ZFPRA, v. 39, no. 10, 1984, 464-466.
377. Bunkin, F.V.; Luk'yanchuk, B.S.; Shafeyev, G.A. (IOF). Oxidation of ammonia and synthesis of nitrogen-containing compounds under the action of laser radiation. KVEKA, no.5, 1984, 1069-1071.
378. Chmel', A.Ye.; Vettegren', V.I.; Yeron'ko, S.B. (FTI; GOI). Breaking of polyethylene molecular chains under the effect of 1.06 um laser radiation. MKMAD, no. 3, 1984, 535-561.
379. Davtyan, A.M.; Drampyan, R.Kh.; Movsesyan, M.Ye. (IFI). Induction EMF from the interaction of non-resonant laser radiation with potassium vapor. KVEKA, no. 5, 1984, 1003-1007.
380. Dolzhikov, V.S.; Laptev, V.B.; Ryabov, Ye.A.; Furzikov, N.P. (ISAN). Effect of rotational relaxation on multiphoton dissociation of CF(sub3)Br in the presence of buffer gases. KVEKA, no. 6, 1984, 1260-1262.
381. Fiksel', A.I.; Parmon, V.N.; Zamarayev, K.I. (IKatAN). Study on the recombination mechanism for products of two-photon ionization of N, N, N', N'-tetra methyl paraphenyldiamine in a glassy squalane over a broad temperature range. KHVKA, no. 3, 1984, 232-238.
382. Karlov, N.V.; Laguchev, A.S.; Orlov, A.N.; Petrov, Yu.N.; Prokhorov, A.M. (IOF). Spectral dependence of the laser control of diffusion of resonant gases through capillaries. PZTFD, no. 10, 1984, 581-584.

383. Kaulakis, B.P.; Serapinas, P.D. (IFANLi). Spectroscopic analysis of the interaction of Rydberg atoms with neutral atomic particles. LFSBA, no. 3, 1984, 3-37.
384. Khabibullayev, P.K.; Yupusov, M.S.; Makhkamov, Sh.; Oksengendler, B.L.; Pakharukov, Yu.V. (IYaFANUz). Effect of ionizing radiation on the breakdown of solid solutions. FTPPA, no. 5, 1984, 915-918.
385. Kozlova, Ye.K.; Portnyagin, A.I.; Romanchenko, A.N.; Filippov, A.Ye. (MGU). The occurrence of ordered formations during the action of optical radiation on a galvanic process. KVEKA, no.6, 1984, 1280-1282.
386. Kudin, N.I.; Librovič, V.B.; Pazel'skiy, V.V.; Soloukhin, R.I.; Topchiyan, M.Ye.; Tsyganov, S.A. (). Detonation, large scale explosion and combustion processes (IX International colloquium on gasdynamic explosion and reacting systems ). FGVZA, no. 3, 1984, 116-128.
387. Luk'yanchuk, B.S.; Sisakyan, Ye.V.; Shafeyev, G.A.; Koklin, A.A. (IOF). Laser etching of semiconductors by thermodissociation products from strongly absorbing gas mixtures. IOF. Preprint, no. 128, 1984, 23 p.
388. Myagkov, S.A. (FIAN). Kinetics of excited molecules. Diffusion of a buffer gas of low concentration in a gas excited by an external resonance field. FIAN. Preprint, no. 144, 1984, 11 p.
389. Myagkov, S.A.; Sazonov, V.N. (FIAN). Kinetics of excited molecules. Selective diffusion of resonance molecules occurring in a transient state in a buffer gas. FIAN. Preprint, no. 143, 1984, 30 p.
390. Nosov, V.V.; Repinskiy, S.M.; Dul'tsev, F.N. (). Study of pyrolysis of silane and silane-ammonia using IR laser heating. KNKTA, no. 3, 1984, 530-534.
391. Polevoy, A.V.; Matyuk, V.M.; Grigor'yeva, G.A.; Potapov, V.K. (NIFKhI). Kinetics of intermediate product formation during stepped photoionization of benzaldehyde molecules by UV laser radiation. KHVKA, no. 3, 1984, 195-199.
392. Shafeyev, G.A. (IOF). Experimental study on a laser-stimulated ammonia oxide reaction. IOF. Preprint, no. 194, 1984, 31 p.

393. Tursunov, A.T.; Eshkobilov, N.B. (). Detection of individual gallium atoms in an atomic beam. ZTEFA, no. 1, 1984, 166-168. (RZFZA, 84/5L1054).
394. Tursunov, A.T.; Eshkobilov, N.B. (ISAN). Laser photoionization spectroscopy of Rydberg states of the gallium atom. ISAN. Preprint, no. 12, 1983, 37 p. (RZFZA, 84/5L143).
395. Zayats, A.Yu.; Perov, A.A.; Stepanov, A.N.; Simonov, A.P. (). Photoionization of highly excited states of atoms and molecules by CO<sub>2</sub> laser radiation. Khimicheskaya fizika, no. 2, 1983, 278-282. (RZFZA, 84/6L286).

G. MEASUREMENT OF LASER PARAMETERS

396. Abashev, Yu.G.; Yelkin, G.A.; Pushkin, S.B. (). Preliminary cesium atomic-beam time and frequency standards. IZTEA, no. 12, 1983, 36-38. (RZRAB, 84/5Ye472).
397. Afanas'yev, P.G.; Bogdanov, O.S.; Daragan, V.D.; Kotov, A.Yu.; Nalivayev, V.I.; Pampura, V.B. (). Calorimeter for continuous measurement of laser radiation power up to 10 kilowatts. PRTEA, no. 1, 1984, 180-182. (RZFZA, 84/6A220).
398. Afanas'yev, P.G.; Bogdanov, O.S.; Daragan, V.D.; Kotov, A.Yu.; Nalivayev, V.I.; Pampura, V.B. (). Feed-through thermocouple power meter for laser radiation. PRTEA, no. 1, 1984, 210-211. (RZFZA, 84/6L952).
399. Arbekov, V.I.; Ulanovskiy, M.V.; Zagorskiy, Ya.T.; Levi, A.M.; Glazov, A.I. (). Photoelectric instrument for measuring the relative energy density distribution in pulsed lasers. IZTEA, no. 5, 1984, 21-22.
400. Aver'yanov, K.P.; Speranskiy, Yu.V.; Burdayev, B.Ya.; Chalkin, S.F.; Churakov, V.P. (). Method for measuring the parameters of picosecond pulsed optical signals. OTIZD, no. 38, 1983, 1048427. (RZRAB, 84/6Ye555).
401. Belousov, N.D.; Dynnik, Yu.T.; Kireyeva, S.I.; Skorobogatov, B.S. (VNIIMono). Method for determining the lasing volume, losses in optical resonator elements, and illumination efficiency of pulsed laser systems. VNIIMono. Sbornik nauchnykh trudov, no. 11, 1983, 44-49. (RZRAB, 84/5Ye480).



402. Bogolyubov, A.V.; Panin, V.V.; Stepanov, B.M. (). Using an avalanche photodiode to reduce noise in a magneto optic converter. PRTEA, no. 1, 1984, 172-174. (RZFZA, 84/6A322).
403. Bryukhovetskiy, A.P.; Spigulis, Ya.A.; Orlov, R.V. (). Pulsed radiation calibrator for the 1.06 um wavelength. IZTEA, no. 12, 1983, 26-27. (RZRAB, 84/5Ye479).
404. Bukovskiy, B.L.; Kaltygin, Yu.M.; Raykhert, V.A. (). Digital filter for a high-precision laser wavelength meter. PRTEA, no. 1, 1984, 140-142. (RZFZA, 84/6L957).
405. Chereugin, V.L.; Kuznetsov, A.A. (). 400-channel commutator for measuring the energy distribution of laser radiation. IZTEA, no. 5, 1984, 16-18.
406. Didyk, L.A.; Rudenko, L.I. (). Device for measuring and recording power level instability of laser radiation. PRTEA, no. 1, 1984, 235. (RZFZA, 84/6L954).
407. Gaygerov, B.A.; Yelkin, G.A.; Zhestkova, N.D. (). Basic trends in the development of hydrogen oscillators. IZTEA, no. 12, 1983, 38-40. (RZRAB, 84/5Ye482).
408. Kokodiy, N.G.; Yefimov, V.F.; Timoshenko, V.N.; Berlin, G.S. (). Device for measuring the energy of laser radiation. OTIZD, no. 21, 1984, 797330.
409. Kokodiy, N.G.; Yefimov, V.F.; Timoshenko, V.N.; Berlin, G.S. (). Ponderomotive device for measuring the energy of laser radiation. OTIZD, no. 20, 1984, 942500.
410. Kolosov, V.A.; Nikolayev, Ye.A.; Toporov, V.I.; Shelemin, Ye.B. (). Device for stopping down laser radiation. OTIZD, no. 19, 1984, 1094015.
411. Kondratyuk, N.V.; Demidchik, K.L.; Sender, V.R. (BPI, SKTBOPIFANB). Automatic system for measuring laser pulse energy. Priborostroyeniye, no. 6, Minsk, 1984, 45-48.
412. Korshikov, V.B.; Lakhno, P.R.; Rozhdestvin, V.N. (). Formation of a given field distribution in a cross-section of a laser beam. IZTEA, no. 5, 1984, 19-21.

413. Kotyuk, A.F.; Korshikov, V.B.; Stepanov, B.M.; Tikhomirov, S.V.; Yakovlev, V.A. (). Metrological quality control for measuring the relative energy density in the beam cross-section and divergence of pulsed laser radiation. IZTEA, no. 5, 1984, 13-14.
414. Kuznetsov, A.A. (). Multichannel analog signal commutators for instruments for measuring the energy distribution in transverse cross-sections of pulsed radiation. IZTEA, no. 5, 1984, 14-16.
415. Lash, A.A.; Yundev, D.N. (IVTAN). Visualization of submillimeter laser radiation by means of a pyroelectric television camera. PRTEA, no. 3, 1984, 193-196.
416. Malyshev, Yu.M.; Rastorguyev, Yu.G.; Titov, A.N. (VNIFTRI). Frequency shifts in lasers stabilized by the third harmonic from saturation of the refractive index. KVEKA, no. 6, 1984, 1257-1260.
417. Means for measuring the average power of laser radiation. Types. Basic parameters. Methods of measurement. State standard USSR. GOST 25811-83. (RZRAB, 84/6Ye5).
418. Means for measuring the energy of pulsed laser radiation. Types. Basic parameters. Methods of measuring the basic parameters. State standard USSR. GOST 25678-83. (RZRAB, 84/6Ye6).
419. Neumyvakin, Yu.K.; Perskiy, M.I.; Zakharenko, M.A. (). Calibration of automated laser systems. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 97-102.
420. Shumilin, V.P. (). Interference pressure converters. IZTEA, no. 5, 1984, 33-34.
421. Snopko, V.N. (). Analysis of polarized radiation which has passed through an anisotropic optical element. VINITI. Deposit, no. 362-84, 18 Jan 1984, 10 p. (RZFZA, 84/5L706).
422. Zagorskiy, Ya.T.; Karabak, Yu.V. (). Dependence of measurement errors of the relative energy or power distribution in a transverse cross-section of a laser beam on the pulse ratio of a multielement converter. IZTEA, no. 5, 1984, 18-19.

## H. LASER MEASUREMENT APPLICATIONS

### 1. Direct Measurement by Laser

423. Abil'siitov, G. (NITsTLAN). Lasers in the work place. TKHMA, no. 6, 1984, 34-36.
424. Aleksandrov, A.L.; Pososhenko, L.Z. (SKBIRE). Equipment for physics research. Pribory i oborudovaniye dlya nauchnykh issledovaniy. Moskva, 1983, 62-82. (RZFZA, 84/5A233).
425. Aleksandrov, V.K.; Il'in, V.N.; Pryadchenko, S.V. (IEANBel). Method and device for controlling the diameter of microfibers. OTIZD, no. 21, 1984, 1096493.
426. Alekseyev, V.V.; Kharlamova, Ye.Yu.; Checheybayev, M.S. (). Study on the interference properties of an optical system of refractometers with tetrahedral reflectors. Golograficheskiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 100-104. (RZRAB, 84/5Ye612).
427. Antropov, Ye.T.; Karpukhin, V.T.; Konev, Yu.B.; Skuratov, N.S. (IVTAN). Method for measuring the reflection coefficient of an optical surface. OTIZD, no. 28, 1983, 1032375. (RZRAB, 84/5Ye486).
428. Avtonomov, V.K.; Vanyurikhin, A.I.; Zaytsev, I.I.; Zozulya, L.G.; Prokopenko, E.A. (). Automatic goniometer. OTIZD, no. 24, 1984, 1100500.
429. Bagryanskiy, P.A.; Belkin, V.S. (IYaFSOAN). System for stabilizing the baseline of a two-frequency interferometer. PRTEA, no. 3, 1984, 178-180.
430. Bartke, Ye.; Ivanov, I.Ts.; Shcherbakov, Yu.A. (OIYaI). Use of holography in high-resolution track detectors (bubble and streamer chambers). OIYaI. Preprint, no. R1-83-742, 1983, 14 p. (KNLTA, 22/84, 19098).
431. Belinskiy, A.V. (MIIGAiK). Laser probing of optically transparent media using high-speed photography. ZNPFA, no. 3, 1984, 206-212.
432. Belyayev, S.A.; Bogdankevich, O.V.; Dyukov, V.G.; Kudiyarov, Yu.A. (VNITsISPIV). An investigation of the laws governing the formation of an image in a laser scanning microscope. KVEKA, no.5, 1984, 998-1003.

433. Berezovskiy, V.V.; Splavnik, Yu.V. (). The coefficients of the scattering of radiation by natural surfaces in the region of 9.3 and 10.6 microns. ZPSBA, v.40, no.5, 1984, 805-808.
434. Bogatyrev, V.Ya; Mukhin, V.A. (). An experimental investigation of the flow in shallow and deep cavities. ZPMFA, no. 3, 1984, 70-74.
435. Bolonin, A.A. (). Electrooptically modulated photoelectric microscope. Issledovaniya v oblasti lineynykh i uglovykh izmereniy. Leningrad, 1983, 22-26. (RZFZA, 84/5L707).
436. Bondarenko, I.D. (). Using corner reflectors in interference devices for measuring angles. MTRLB, no. 5, 1984, 19-26.
437. Borisov, B.D. (ITF). Measurement of the long-term stability of quantum frequency standards based on Kalman filtering. KVEKA, no.6, 1984, 1291-1294.
438. Bozyk, M. (). Measuring the refraction profile of optical fibers. EKNTB, no. 6, 1983, 10-16. (RZRAB, 84/5Ye231).
439. Bratukhin, Yu.K.; Zuyev, A.L. (). Thermocapillary drift of air bubbles in a horizontal Hele-Shaw cell. IMZGA, no. 3, 1984, 62-67.
440. Bukharayev, A.A.; Yafayev, N.R. (KazFTI). Effect of Zn and Cd on radiation-optical properties of alkali-borate glass. FKSTD, no. 3, 1984, 332-336.
441. Bukovskiy, B.L.; Kaltygin, Yu.M.; Raykhert, V.A. (SNIIM). System for stabilizing the speed of motion of an electrodynamic interferometer drive. PRTEA, no. 3, 1984, 176-178.
442. Chetkin, M.V.; Gadetskiy, S.N.; Kuz'menko, A.P.; Filatov, V.N. (MGU). High-speed photography for studying the dynamics of domain boundaries. PRTEA, no. 3, 1984, 196-199.
443. Danileyko, M.V.; Fal', A.M.; Fedin, V.P.; Yatsenko, L.P. (IFANUK). The possibility of using the concurrent resonances of ring lasers to create gravitational wave detectors. ZFPRA, v. 39, no. 9, 1984, 428-430.

444. De, S.T.; Kazachok, A.G.; Loginov, A.V.; Solodkin, Yu.N. (). Device for digitizing of holographic interferograms. Author's certificate no. 838327, 15 Jun 1981. (cited in TKTEA, no. 5, 1984, 37).
445. Dianov, Ye.M.; Karasik, A.Ya.; Mamyshev, V.P.; Onishchukov, G.I.; Fomichev, A.A. (). Direct measurements of the dispersion of single-mode fiber lightguides in the range from 1.15 to 1.4 microns. PZTFD, no.9, 1984, 518-522.
446. Drozd, P.I.; Kolomiyets, V.V.; Poperenko, L.V.; Shaykevich, I.A. (KGU). Optical properties of a nickel surface purified by ion bombardment. KGU. Vestnik. Fizika, no. 24, 1983, 40-42.
447. Drozd, P.I.; Zabelin, S.I.; Poperenko, L.V.; Shaykevich, I.A. (KGU). Spectral ellipsometer with scanning of the angles of incidence. PRTEA, no. 3, 1984, 181-182.
448. Fedorov, A.S. (). Automated laser geodetic control systems in land reclamation projects. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 4-55.
449. Fedorov, A.S. (). Calibration of the UKL-1 laser grading indicator. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 117-121.
450. Fedorov, A.S. (). Control measurements by the UKL-1 laser grading indicator. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 121-123.
451. Gas'kevich, G.I. (FMIANUkr). Broadening the scope of problems amenable to coherent optical systems for processing aerospace geological information. Konferentsiya molodykh uchenykh FMIANUkr, 11th, L'vov, 10-13 Oct 1983. Sektsiya otbora i peredachi informatsii. Materialy. VINITI. Deposit, no. 562-84, 31 Jan 1984, 18-20. (DERUD, 5/84, 90).
452. Grebnev, A.A.; Grebenyuk, Ye.I.; Vitman, A.D. (GOI). Automatic control of defects in optical components. OPMPA, no. 5, 1984, 43-46.
453. Grishko, V.I.; Yudelevich, I.G.; Kravchenko, L.Kh.; Nikitina, V.P. (INKh). Detecting arsenic and phosphorus by intracavity thermal lens calorimetry. ZAKHA, no. 5, 1984, 826-830.

454. Gudkov, V.A. (IKAN). Structure of liquid crystalline poly-n-h-hexyloxybenzoil-n-oxiphenyl-N-methacryloil-w-aminolaurate polymer. KRISA, no. 3, 1984, 529-536.
455. Gusev, V.G.; Poyzner, B.N. (). Holographic method for monitoring a 3D phase object using double exposure. Author's certificate USSR, no. 838321, 15 Jun 1981. (cited in TKTEA, no. 5, 1984, 37).
456. Gushchin, Ye.M.; Lebedev, A.N.; Somov, S.V. (MIFI). Tracks in a streamer chamber induced by an N2 laser. PRTEA, no. 3, 1984, 33-36.
457. Igil'manov, Zh.A. (). Using laser geodetic devices in the construction of underground passages. GZKGA, no. 5, 1984, 27-29.
458. Ipatov, A.L.; Kuz'min, A.I.; Savin, A.A. (FIAN). Interferometer for studying the behavior of a gas channel behind a relativistic e-beam pulse. FIAN. Preprint, no. 186, 1984, 7-9.
459. Ismailov, D.A. (). Study on thermal deformations in integrated microcircuits and visualization of the relief of photothermoplastic carriers by holographic interferometry. Golograficheskiye metody khraneniya, preobrazovaniya i obrabotki informatsii. Frunze, 1983, 81-89. (RZRAB, 84/5Ye704).
460. Ivanov, I.Ts.; Lyashenko, V.I.; Pontekorvo, D.B.; et al. (OIYaI). Helium-methane streamer chamber at 10 atmospheres with a holographic information display. OIYaI. Preprint, no. D1-83-798, 1983, 10 p. (KNLTA, 22/84, 19097).
461. Kirichuk, P.A.; Kotlyarov, V.P.; Anyakin, N.I. (KPIA). Device for making a regular microscopic profile. OTIZD, no. 18, 1984, 1092035.
462. Kon'kov, A.A.; Shikov, V.K.; Eygenon, Ye.B. (IVTAN). Study on optical properties of atomic potassium in a nitrogen plasma. TVYTA, no. 3, 1984, 411-423.
463. Koronkevich, V.P.; Lenkova, G.A. (). A diffraction interferometer. AVMEB, no.3, 1984, 61-67.
464. Kozubovskiy, V.R.; Goldovskiy, V.L.; Chekriy, S.G. (). Multi-component gas analyzer based on a He-Ne laser. UFZHA, no. 5, 1984, 778-781.

465. Krepelkova, H.; Cihakova, J.; Ditrich, V. (). Significance of He-Ne lasers in optical systems for new optics and optoelectronic measuring, processing and control methods. JMkoa, no. 11, 1983, 318-320. (RZRAB, 84/5Ye577).
466. Kucharski, M. (). Optical fiber sensors. JMkoa, no. 9, 1983, 257-261. (RZRAB, 84/6Ye406).
467. Kucheryuk, V.I.; Yakubovskiy, Yu.Ye.; Bulanova, O.D.; Voronov, V.S.; Turnayev, Yu.G. (TyumII). Methods of holographic interferometry, moire and speckle interferometry in studying thin-wall elements of structures. VINITI. Deposit, no. 420-84, 20 Jan 1984, 61 p. (DERUD, 5/84, 295).
468. Kuts', A.G.; Muravskiy, L.I. (FMIANUkr). Improvement of noise rejection in coherent optoelectronic systems for analysis of linear elements of geological relief. Konferentsiya molodykh uchenykh FMIANUkr, 11th, L'vov, 10-13 Oct 1983. Sektsiya otbora i peredachi informatsii. Materialy. VINITI. Deposit, no. 562-84, 31 Jan 1984, 70-73. (DERUD, 5/84, 105).
469. L'vov, G.; Semenov, A. (). A million years with one-second accuracy. NAUZA, no. 6, 1984, 2-10.
470. Marchenko, S.N. (). Mechanism of thermomagnetic recording on MnBi film. FMMTA, no. 2, 1983, 259-262. (RZFZA, 84/5N850).
471. Matveyev, B.A.; Stus', N.M.; Talalakin, G.N. (GOI). Precision optical method for oriented cutting of crystals. OPMPA, no. 6, 1984, 34-36.
472. Mitrofanov, A.S.; Tarlykov, V.A.; Fefilov, G.D. (LITMO). The DID-4 and DID-5 laser diffractive diameter-measuring instruments. PRTEA, no. 3, 1984, 242.
473. Muravskiy, L.I. (FMIANUkr). An approach to the problem of coherent optical detection of linear elements. Konferentsiya molodykh uchenykh FMIANUkr, 11th, L'vov, 10-13 Oct 1983. Sektsiya otbora i peredachi informatsii. Materialy. VINITI. Deposit, no. 562-84, 31 Jan 1984, 111-120. (DERUD, 5/84, 116).

474. Muravskiy, L.I.; Gas'kevich, G.I. (FMIANUkr). Study on the accuracy characteristics of coherent optical processors for analyzing linear element grids. Konferentsiya molodykh uchenykh FMIANUkr, 11th, L'vov, 10-13 Oct 1983. Sektsiya otbora i peredachi informatsii. Materialy. VINITI. Deposit, no. 562-84, 31 Jan 1984, 121-126. (DERUD, 5/84, 147).
475. Neumyvakin, Yu.K.; Perskiy, M.I.; Zakharenko, M.A. (). Control measurements by automated laser systems in land grading. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 110-114.
476. Neumyvakin, Yu.K.; Perskiy, M.I.; Zakharenko, M.A. (). Control survey of graded land surfaces by automated laser systems. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 114-117.
477. Nikolov, I.D.; Stoyanova, K.S. (). Optical device for Fourier analysis. Author's certificate Bulgaria, no. 33395, 25 Feb 1983. (RZRAB, 84/6Ye436).
478. Novodvorskiy, O.A.; Zorov, N.B.; Kuzyakov, Yu.Ya. (). High-intensity source of coherent radiation in the visible and UV regions, generated by nonlinear optical methods from YAG and dye lasers. CRNTShSL. Materialy. Minsk, 1983, 41-43. (RZFZA, 84/6L599).
479. Orlov, R.A. (). Radioholographic determination of the interrelation of spatially coincident antennas. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 29-36.
480. Ovchinnikov, I.T.; Yanshin, E.V. (SNIIE). The pulsed high-voltage electrical conductivity of water. PZTFD, no.12, 1984, 764-766.
481. Pasmurov, A.Ya. (). Measuring the parameters of scattering objects by radioholography. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 37-46.
482. Perminova, V.N.; Sysoyev, V.K. (IOF). Estimating the sensitivity of polarized fiberoptic IR-lightguide pressure sensors. IOF. Preprint, no. 125, 1984, 8 p.
483. Pokora, L.; Wereszczynski, Z. (). Various problems of a laser diagnostics device in plasma dynamics research. Postepy cybernetiki, no. 4, 1983, 5-26. (RZFZA, 84/6G452).



484. Pozdnyakov, V.F.; Sergeyev, S.S.; Kudinov, N.V.; Vorob'yev, O.M. (MMI). Device for measuring linear translation. OTIZD, no. 20, 1984, 1095034.
485. Rabinovich, G.I. (). Optical probing method for studying a vortex effect. MTRLB, no. 5, 1984, 14-19.
486. Rinkevichyus, B.S.; Smirnov, V.I.; Timofeyev, A.S. (MEI). Optical Doppler device for measuring the gradient of flow rates. OTIZD, no. 19, 1984, 1093978.
487. Rinkevichyus, B.S.; Smirnov, V.I.; Timofeyev, A.S. (MEI). Optical Doppler device for measuring the Reynolds number in a liquid or gas flow. OTIZD, no. 17, 1984, 1091076.
488. Romaniuk, R. (). Effect of interference in lightguides. EKNTB, no. 6, 1983, 16-20. (RZRAB, 84/5Ye232).
489. Romaniuk, R. (). Integrated optical fiber interferometer. EKNTB, no. 7-8, 1983, 47-50, 3-4. (RZFZA, 84/6L671).
490. Safronov, G.S.; Tishko, T.V.; Garagataya, A.M. (). Holographic polarization microscope. PRTEA, no. 1, 1984, 237. (RZFZA, 84/6L668).
491. Shaykevich, I.A.; Drozd, P.I.; Poperenko, L.V. (KGU). Spectroellipsometric study on the electron structure of metals and alloys. KGU. Vestnik. Fizika, no. 25, 1984, 39-49.
492. Shelyubskiy, V.I.; Zadorozhnaya, T.D. (). Laser device for detecting inhomogeneities in glass. STKRA, no. 5, 1984, 8-10.
493. Skripnik, Yu.A.; Glazkov, L.A.; Grib, B.N.; Vodotovka, V.I.; Glazkov, A.L. (KTILP). Device for photoelectric recording of the spectra of dispersed media. OTIZD, no. 24, 1984, 1100540.
494. Skvorchevskiy, A.K.; Promyslov, Ye.V.; Galin, V.T.; Pachkoriya, K.V. (MIIGA). Device for automatically balancing rotors in the process of rotation. OTIZD, no. 22, 1984, 563890.
495. Slezkin, V.D. (). Method and device for automatically balancing rotors. OTIZD, no. 21, 1984, 1096512.

496. Sukholinin, V.L. (ISMSANGruz). Methods and results of speckle interferometric studies on planar stress concentrations in polymer plates during creep. SAKNA, no. 3, 1984, 557-560.
497. Tatarintsev, K.B. (MFTI). Correlation characteristics of a field in a coherent image of rough objects. VINITI. Deposit, no. 1307-84, 5 Mar 1984, 6 p. (RZFZA, 84/6L18).
498. Tatarintsev, K.B. (MFTI). Correlation characteristics of intensity in a coherent image of diffuse surfaces. VINITI. Deposit, no. 1308-84, 5 Mar 1984, 12 p. (RZFZA, 84/6L19).
499. Tishchenko, V.V.; Chesskiy, Yu.V.; Shepetukha, M.I. (). Holographic interferometric study on the distribution of displacements on the surface of a cylindrical piezoceramic converter. Akustika i ul'trazvukovaya tekhnika, no. 19, Kiyev, Tekhnika, 1984, 14-19.
500. Tyryshkin, I.S. (). A scanning Fabry-Perot interferometer with stabilization of the base. VINITI. Deposit, no. 7054-83, 28 Dec 1982. (ZPSBA, v.40, no.5, 1984, 863).
501. Velikotskiy, V.L.; Kozin, G.I.; Protsenko, Ye.D.; Savelov, A.S.; Tel'kovskiy, V.G. (). Two-mode laser interferometer for plasma diagnostics. Diagnosticheskiye metody v plazmennyykh issledovaniyakh. Moskva, 1983, 3-12. (RZFZA, 84/5G458).
502. Volkonskiy, V.B.; Popov, Yu.V.; Yakovlev, V.V. (). Phase method for measuring distances in highly absorptive media. OTIZD, no. 40, 1982, no. 629807. (RZFZA, 84/6L685).
503. Voronkov, V.V.; Voronkova, G.I.; Kalinushkin, V.P.; Murina, T.M.; Nazarov, T.; Prokhorov, A.M.; Remizov, O.A.; Teshabayev, A.T. (FIAN). Impurity clouds and microdefects in silicon grown by the Czochralski method. FTPPA, no. 12, 1983, 2137-2142.
504. Voronkov, V.V.; Voronkova, G.I.; Kalinushkin, V.P.; Murin, D.I.; Murina, T.M.; Prokhorov, A.M. (IOF). Temperature dependence of small-angle scattering of light by pure silicon crystals. FTPPA, no. 5, 1984, 938-940.
505. Voyevodin, A.A. (LISI). Method for determining the deformation of an object surface. OTIZD, no. 23, 1984, 1099099.

506. Zakharenko, Yu.G.; Kalinin, N.A.; Makarova, I.G.; Mel'nikov, N.A. (). Current status of work on developing frequency-stabilized He-Ne lasers for precise measurements of length. *Issledovaniya v oblasti lineynykh i uglovykh izmereniy*. Leningrad, 1983, 7-11. (RZFZA, 84/5L1145).
507. Zastrogin, Yu.F. (). Ranges of measurements by laser measuring instruments with a variable index of frequency modulation. *Pribory tochnoy mekhaniki*. VZMI. Moskva, 1983, 44-49. (RZFZA, 84/6L1140).
508. Zastrogin, Yu.F.; Matveyev, V.V. (). Laser measurement systems with frequency modulation for monitoring the parameters of mechanical vibrations. *IZTEA*, no. 6, 1984, 29-31.
509. Zemlyanskiy, V.M. (KIIGA). Laser Doppler velocimeter. *OTIZD*, no. 23, 1984, 1099284.
510. Zemlyanskiy, V.M. (KIIGA). Using the theory of Mie scattering for analyzing the parameters of the Doppler signal from laser anemometers. *UkrNIINTI*. Deposit, no. 185UK-D84, 6 Feb 1984, 146 p. (RZFZA, 84/6L1137).
511. Zhilkin, V.A. (). Elastoplastic studies using a holographic moire method. *PPCNB*, no. 6, 1984, 107-111.

## 2. Laser-Excited Optical Effects

512. Akhmanov, S.A.; Koroteyev, N.I.; Magnitskiy, S.A.; Morozov, V.B.; Tarasevich, A.P.; Tunkin, V.G. (MGU). The kinetics of dephasing the vibrations of N<sub>2</sub> molecules in a supersonic stream. *ZFPRA*, v.39, no.9, 1984, 409-412.
513. Apanasevich, S.P.; Karpushko, F.V.; Sinitsyn, G.V. (IFANB). The fast response of bistable devices based on coated thin-film interferometers. *KVEKA*, no.6, 1984, 1288-1290.
514. Ashmontas, S.; Shirmulis, E.; Stonis, S. (IFANLi). Study on photo-e.m.f. arising at a p-n junction in germanium under pulsed CO<sub>2</sub> laser irradiation. *LFSBA*, no. 3, 1984, 76-82.
515. Balykin, V.I.; Letokhov, V.S.; Sidorov, A.I. (ISAN). The formation of an intense steady-state flux of cold atoms by the method of laser retardation of an atomic beam. *ZETFA*, v.86, No.6, 1984, 2019-2029.

516. Baryshnikov, S.V.; Bursian, E.V.; Girshberg, Ya.G.; Lyakhovitskaya, V.A.; Maslov, V.V. (LGPI). Transition of a ferroelectric to a state with a periodic structure in an intense e-m field. FTVTA, no. 6, 1984, 1872-1874
517. Baydullayeva, A.; Gorodetskiy, I.Ya.; Korsunskaya, N.Ye.; Mozol', P.Ye.; Polisskiy, G.N. (IPANUK). Effect of laser irradiation on the properties of Zn(x)Cd(1-x)Se solid solution single crystals. FTVTA, no. 5, 1984, 1334-1338.
518. Benditskiy, A.A.; Granovski, A.B.; Rukman, G.I.; Stepanov, B.M. (VNIIOFI). A mechanism for the luminescence of the surfaces of some materials under the action of laser radiation. KVEKA, no.6, 1984, 1269-1270.
519. Bezuglov, N.N.; Klyucharev, A.N.; Sheverev, V.A. (). Effect of the velocity distribution function for atoms on the effectiveness of the collision reactions in an atomic beam. ZPSBA, v.40, no.6, 1984, 915-921.
520. Borovik-Romanov, A.S.; Demokritov, S.O.; Kreynes, N.M.; Petrov, S.V. (IFP). Scattering of light in ferrimagnetic RbNiF(sub3). ZETFA, v.86, no.6, 2273-2281.
521. Budkin, L.A.; Penenkov, M.N.; Pikhtele, A.I.; Puzanov, S.L. (). Study on optical frequency shift in a quantum discriminator with laser pumping. IVYRA, no. 6, 1984, 705-708.
522. Buritskiy, K.S.; Zolotov, Ye.M.; Chernykh, V.A. (). Determination of the structural characteristics of single-mode channel Ti:LiNbO3 waveguides. KVEKA, no.6, 1984, 1147-1151.
523. Bychkov, R.M.; Krivenkov, B.Ye.; Chuguy, Yu.V. (). Increasing the accuracy of diffraction methods for checking size. AVMEB, no.3, 1984, 75-84.
524. Bykov, A.M.; Volyar, A.V. (). The polarization optics of multi-mode lightguides. OPSPA, v.56, no.5, 1984, 894-899.
525. Dorosh, V.S.; Ivanov, V.N.; Nikitin, V.A.; Nikitina, Ye.P.; Yakovenko, N.A. (). Gradient microlenses obtained by the method of electrostimulated diffusion. AVMEB, no.3, 1984, 108-111.

526. Garbuzov, D.Z.; Agayev, V.V.; Sokolova, Z.N.; Khalfin, V.B.; Chalyy, V.P. (FTI). Recombination processes in InGaAsP/InP double heterostructures at 1-1.5  $\mu\text{m}$ . FTPPA, no. 6, 1984, 1069-1076.
527. Gorodnichyus, G.A.; Gudyalis, V.V.; Daxis, S.P.; Slavenas, Yu.-Yu.Yu. (). Study on the bleaching process of cation-anion polymethine dyes. LFSBA, no. 6, 1983, 92-96. (RZFZA, 84/5L1009).
528. Grigor'yan, V.S. (). Interaction of ultrashort pulses of light with an excited two-photon resonance medium. ZETFA, v.86, no. 6, 1984, 2005-2018.
529. Grigor'yants, A.V.; Golik, L.L.; Rzhanov, Yu.A.; Yelinson, M.I.; Balkarey, Yu.I. (). Switching waves in a multi-stable Fabry-Perot interferometer with thermo-optical nonlinearity. KVEKA, no.5, 1984, 1060-1065.
530. Kagan, M.S.; Landsberg, Ye.G.; Chernyshov, I.V. (IRE). Negative conductivity due to boundary vibrations in a static domain. FTPPA, no. 6, 1984, 986-989.
531. Kakichashvili, Sh.D. (). The effect of rotating the axis of photoinduced anisotropy. OPSPA, v.56, no.6, 1984, 977-978.
532. Kamrukov, A.S.; Kashnikov, G.N.; Kozlov, N.P.; Kuznetsov, S.G.; Orlov, V.K.; Protasov, Yu.S.; Reyterov, V.M. (MVTU). An experimental investigation of the radiative and gas dynamical interaction of powerful fluxes of vacuum ultraviolet radiation with transparent condensed media. KVEKA, no.5, 1984, 968-980.
533. Korniyenko, V.P.; Kotsubanov, V.D.; Letuchiy, A.N.; Pavlichenko, O.S. (). A method for measuring electron temperature by means of resonant fluorescence. ZPSBA, v.40, no.6, 1013-1016.
534. Kostyuk, N.M.; Peshko, I.I.; Ponomarenko, Yu.V.; Fedorenko, L.L. (IFANUK; IPANUK). Photoconductivity of InSb during picosecond excitation. UFZHA, no. 6, 1984, 888-893.
535. Krichevtsov, B.B.; Markovin, P.A.; Petrov, S.V.; Pisarev, R.V. (FTI). Isotropic and anisotropic magnetic refraction of light in the cubic antiferromagnets  $\text{KNiF}_3$  and  $\text{RbMnF}_3$ . ZETFA, v.86, no.6, 1984, 2262-2272.

536. Lebedev, M.V.; Lysenko, V.G.; Timofeyev, V.B. (IFTT). Spatial dispersion effects in a mixed mode of exciton polaritons in CdS. ZETF, v. 86, no. 6, 1984, 2193-2200.
537. Melishchuk, M.V.; Tikhonov, Ye.A.; Shpak, M.T. (). Study of the fluorescence of polymethine dyes with nanosecond time resolution under conditions of selective excitation. OPSPA, v.56, no. 6, 1984, 1033-1036.
538. Morozov, N.A.; Rukovishnikov, A.I. (IRE). Exponential approximation of thermo-optic characteristics of barium strontium niobate single crystals. FTVTA, no. 5, 1984, 1404-1407.
539. Nemet, B.; Santa, I.; Kozma, L. (). Fluorescence nonlinearity of water-soluble fluorescein under the action of laser radiation of high power density [in English]. APYCA, no. 1-2, 1983, 27-34. (RZFZA, 84/5L1007).
540. Paramonov, G.K.; Savva, V.A. (IFANB). Resonance properties of the vibrational mode of molecules under various conditions of coherent excitation by IR laser radiation. IFANB. Preprint, no. 314, 1983, 35 p. (RZFZA, 84/5L834).
541. Rossin, V.V.; Sidorov, V.G. (FTI). Superradiation effect on a transient photoeffect. FTPPA, no. 6, 1984, 1124-1126.
542. Savchuk, A.I.; Derkach, B.Ye.; Vatamanyuk, P.P.; Gavaleshko, N.P. (ChGU). Dispersion of Faraday rotation in tungsten diselenide. IVUFA, no. 5, 1984, 108-110.
543. Senokosov, E.A.; Stoykova, V.G.; Usatyy, A.N.; Chukichev, M.V. (KiGU). Edge luminescence structure in ZnTe epitaxial films on sapphire. FTPPA, no. 6, 1984, 1120-1123.
544. Shabalov, V.V.; Dorosheva, Ye.V. (). Temperature dependence of the rate constants of the transfer of triplet energy between eosin and anthracene. DANTA, no. 7, 1983, 432-435. (RZFZA, 84/5L499).
545. Shmelev, G.M.; Tsurkan, G.I.; Nguyen Quoc Anh (). Photostimulated planar acoustomagneto-electric effect in semiconductors. PSSBB, v. B121, no. 1, 1984, K97-K102. (RZFZA, 84/6N427).

546. Shvegzhda, Zh.L. (). Laser-induced diffusion fluorescence of Na<sub>2</sub> molecules at the atomic 3<sup>(sup2)</sup>P-3<sup>(sup2)</sup>S transition frequency. LZFTA, no. 6, 1983, 12-18. (RZFZA, 84/5L445).
547. Surov, S.P.; Sychugov, V.A. (IOF). Highly efficient excitation of surface e-m waves on a rough metal surface. IOF. Preprint, no. 156, 1984, 15 p.
548. Surov, S.P.; Sychugov, V.A. (IOF). Near-surface radiation of surface e-m waves during propagation along the corrugated surface of a metal. PZTFD, no. 12, 1984, 713-717.
549. Tagiyev, B.G.; Mamedov, G.M.; Bagirzade, E.F.; Mamedov, N.D.; Aliyev, B.Z.; Dzhafarov, M.B. (AzTI). Thermal field quenching of exciton photoconductivity in GaSe<Ge>. FTPPA, no. 6, 1984, 1043-1045.
550. Yepifanov, M.S.; Galkin, G.N.; Zhuravleva, L.L.; Mustayev, P.T.; Strebkov, D.S.; Unishkov, V.A. (FIAN). Measuring the lifetime of charge carriers in high-voltage silicon photoconverters under intense photoexcitation. FTPPA, no. 12, 1983, 2117-2119.
551. Yermolayev, V.L.; Lyubimtsev, V.A. (). Quantum yields of fluorescence from the high singlet excited states that are populated in stages for dye molecules. OPSPA, v.56, no.6, 1984, 1026-1032.
552. Zavr, G.S.; Sil'dos, I.R.; Dolindo, I.I. (IFANEst). Propagation of nonequilibrium phonons in potassium chloride-nitrogen dioxide anion crystals. FTVTA, no. 5, 1984, 1424-1430.
553. Zelenskiy, A.N.; Kokhanovskiy, S.A.; Lobashev, V.M.; Sobolevskiy, N.M.; Vol'ferts, Ye.A. (IYaIAN). Method for polarization of accelerated protons by laser radiation. IYaIAN. Preprint, no. 0307, 1983, 10 p. (RZFZA, 84/5V262).

### 3. Laser Spectroscopy

554. Abdul'manov, R.R.; Vorob'yev, V.M.; Vettegren', V.I. (MGPI). Use of IR and Raman spectroscopy for estimating the local temperature of overstressed interatomic bonds in polymers. VINITI. Deposit, no. 1016-84, 22 Feb 1984, 7 p. (DERUD, 6/84, 702).
555. Aliyev, R.A.; Allakhverdiyev, K.R.; Baranov, A.I.; Ivanov, N.R.; Sardarly, R.M. (IFANaz). Ferroelectric and structural phase transitions in TlInS(sub2) series crystals. FTVTA, no. 5, 1984, 1271-1277.

556. Antonov, V.A.; Strizhevskiy, V.L.; Shukirov, Zh.; Yashkir, Yu.N. (KGU). Nanosecond spectroscopy of IR luminescence. KGU. Vestnik. Fizika, no. 25, 1984, 119-121.
557. Babonas, G.A.; Leonov, Ye.I.; Muminov, I.; Orlov, V.M.; Petrikov, V.D.; Senulene, D.B. (IFPV; FTI). Study on the vibrational spectrum of bismuth iron oxide crystals. LFSBA, no. 3, 1984, 90-96.
558. Banishev, A.F.; Voron'ko, Yu.K.; Osiko, V.V.; Sobol', A.A. (FIAN). Raman scattering in alkali metal phosphate melts. DANKA, v. 274, no. 3, 1984, 559-561.
559. Basov, N.G.; Gubin, M.A.; Nikitin, V.V.; Protsenko, Ye.D. (FIAN). Dual-mode gas lasers and their uses in spectroscopy and optical frequency standards (a review). KVEKA, no.6, 1984, 1084-1105.
560. Basov, N.G.; Kalashnikov, M.P.; Mikhaylov, Yu.A.; Rode, A.V.; Sklizkov, G.V.; Fedotov, S.I. (FIAN). Observing the shift in jumps of the recombination radiation of multiply charged silicon ions in a laser plasma. PZTFD, no.12, 1984, 705-709.
561. Bochkova, I.M.; Mal'tsev, A.N. (). Graphic determination of the populations of levels by modulation of the intensities of the spectral lines. VINITI. Deposit, no. 470-84, 25 Jan 1984, 22 p. (RZFZA, 84/5L164).
562. Brueckner, V.; Fassler, D.; Feller, K.H.; Gase, R. (). Pulse fluorometry of polymethine dyes by means of a Nd:YAG laser streak-camera system. Part 1 [in English]. EXPPA, no. 6, 1983, 511-518. (RZFZA, 84/6L1116).
563. Bunkin, F.V.; Vlasov, D.V.; Gerasimenko, L.M.; Slobodyanin, V.P. (IOF). Possibility of remote laser probing of some non-luminescent compounds in natural reservoirs. KVEKA, no.6, 1984, 1253-1254.
564. Bykovskiy, Yu.A.; Ukraintsev, V.A.; Chistyakov, A.A. (MIFI). Study on degradation of polymers using an IR laser spectrometry method. KHVKA, no. 3, 1984, 274-279.
565. Dubetskiy, B.Ya. (ITF). Saturation of the susceptibility of a gas in the field of a standing wave for multi-photon excitation near resonance at intermediate levels. ZETFA, v.86, no.6, 1984, 1981-1994.



566. Dzhuguryan, L.A. (). Suppression of coherent pedestals in active Raman spectroscopy. ZPSBA, v. 39, no. 6, 1983, 973-979.
567. Gangrskiy, Yu.P.; Markov, B.N. (). Nuclei in laser beams. Novoye v zhizni, nauke, tekhnike. Seriya Fizika, no. 7, Moskva, Znaniye, 1984, 64 p.
568. Georgobiani, A.N.; Lepnev, L.S.; Panasyuk, Ye.I.; Tunitskaya, V.F. (FIAN). Study on IR photoluminescence centers in undoped ZnS crystals. FIAN. Preprint, no. 274, 1983, 58 p. (RZFZA, 84/5L513).
569. Golubeva, N.G.; Korotkov, P.A. (KGU). Raman spectra and structural characteristics of periodates. UFZHA, no. 5, 1984, 679-685.
570. Gorbatyy, Yu.Ye.; Bondarenko, G.V.; Babashov, I.V. (). High-temperature cell for Raman spectroscopy at high pressures. PRTEA, no. 1, 1984, no. 208-209. (RZFZA, 84/6L690).
571. Gorelik, V.S.; Umarov, B.S.; Khashimov, R.N. (). Determining the group velocity of polaritons in GaP crystals by Raman scattering of light. IATOA, no. 2, 1983, 71-75. (RZFZA, 84/5N321).
572. Kal'nitskiy, A.Ya. (KGU). Effect of the duration of illumination on the fluorescence and phosphorescence of ethylcarbazole in solution. KGU. Vestnik. Fizika, no. 24, 1983, 43-48.
573. Klassen, I.F.; Pogorelov, V.Ye. (KGU). Molecular relaxation in liquid crystals. KGU. Vestnik. Fizika, no. 24, 1983, 11-13.
574. Kolesnik, V.V.; Dunayeva, K.M.; Spitsyn, V.I. (MGU). Uranyl propionate compounds with methyl-substituted amides. ZNOKA, no. 6, 1984, 1538-1544.
575. Kolobrodov, V.G.; Sakhno, S.P.; Tymchik, G.S. (GOI). Study on errors in adjusting the optical system of a coherent spectrum analyzer. OPMPA, no. 5, 1984, 7-10.
576. Kremneva, M.A.; Mironova, O.F.; Romanovskaya, G.I. (GEOKhI). Detecting trace amounts of uranium in rocks by a laser-excited luminescence method. ZAKHA, no. 5, 1984, 847-849.

577. Lidman, S.M.; Kutolin, S.A.; Neych, A.I.; Komarova, S.N.; Kauponen, B.A. (NIIZhT). Modelling physical chemical properties of bleaching media. IV. Physical chemical and optical properties of the interactive medium in a dye-molecular glass matrix from Raman and IR spectroscopic data. ZFKHA, no. 6, 1984, 1450-1455.
578. Luk'yanenko, S.F.; Sedel'nikov, A.I. (). An investigation of the effect of apparatus distortions on the method of intracavity laser spectroscopy. ZPSBA, v.40, no.5, 1984, 813-816.
579. Makhanev, A.G.; Gintoft, R.I.; Dzhuguryan, L.A.; Korol'kov, V.S.; Kholodenkov, L.Ye. (). Two-photon spectroscopy of rare-earth ions in crystals. ZPSBA, v.40, no.6, 1984, 964-969.
580. Nemet, B.; Varga, E.; Kozma, L.; Santa, I. (). Determination of the Raman scattering cross section of water by comparing it with the fluorescence of aqueous dye solutions. Quantitative determination of "traces" by using Raman scattering as an internal standard [in English]. APYCA, no. 3-4, 1983, 121-128. (RZFZA, 84/6L224).
581. Novikov, L.V. (). Computer measuring complex for laser spectroscopy. CVPMIVS, 3rd 16-18 Feb 1982. Sbornik trudov. Tema: Mikro-EVM i mikroprotssory v sistemakh avtomatizirovaniy. Moskva, 1983, 147-148. (RZRAB, 84/6Ye628).
582. Osin, M.N.; Smirnov, V.V.; Fabelinskiy, V.I. (IOF). Study on the behavior of the Q-branch contour of gaseous nitrogen in a density range of 0.2-120 Amagat units. IOF. Preprint, no. 108, 1984, 17 p.
583. Porotnikov, N.V.; German, M.; Kovba, L.M. (). Vibrational spectra of complex oxides of the form  $\text{Ln}(\text{sub}2)\text{MgTiO}(\text{sub}6)$ . ZNOKA, no. 6, 1984, 1437-1441.
584. Proskuryakova, Ye.V.; Porotnikov, N.V.; Chaban, N.G. (MITKhT). Vibrational spectrum of lithium titanium oxide ramsdellite. ZNOKA, no. 5, 1984, 1356-1357.
585. Putninya, S.Ya.; Shvegzhda, Zh.L.; Yanson, M.L. (). Determining the populations of the  $3(\text{sup}2)\text{P}(\text{sub}1/2), 3(\text{sup}2)\text{P}(\text{sub}3/2)$  levels of sodium vapor during laser excitation. ZPSBA, v. 40, no. 5, 1984, 731-737.

586. Romanovskaya, G.I.; Zakharova, G.V.; Chibisov, A.K. (GEOKhI). Effect of solution composition on detecting microscopic quantities of uranium(VI) using a laser luminescence method. ZAKHA, no. 5, 1984, 930-933.
587. Shabanov, V.F.; Vetrov, S.Ya.; Shestakov, N.P. (IFSOAN). Light scattering by layered crystals with regular and random distribution of the thickness of the layers. IFSOAN. Preprint, no. 251F, 1983, 28 p. (RZFZA, 84/5L414).
588. Solov'yev, K.N.; Stanishevskiy, I.V.; Starukhin, A.S.; Shul'ga, A.M.; Yegorova, G.D. (). The polarization of phononless lines in the fluorescence spectra of metallic complexes of porphine at 4.2 K by selective laser excitation. ZPSBA, v. 40, no. 5, 1984, 765-773.
589. Suchocka-Galas, K. (). Use of Raman spectroscopy and longwave IR absorption for studying the characteristics of ion aggregates in styrene ionomers. POLIA, no. 8, 1983, 260-263. (RZFZA, 84/6L166).
590. Taranenko, L.V.; Shevel', S.G. (IFANUk). Automation of experiments in spectroscopy. IFANUk. Preprint, no. 20, 1984, 44 p.
591. Tolstorozhev, G.B. (). Third Symposium on Ultrafast Processes in Spectroscopy, Minsk, 28-30 Sep 1983. ZPSBA, v. 40, no. 6, 1984, 1033-1035.
592. Ufimtseva, R.N.; Rabinovich, L.V.; Zhukova, L.P. (GOI). Experience in using the LMA-10 laser microspectrometer analyzer for analyzing deposits. OPMPA, no. 6, 1984, 60-61.
593. Vaksman, M.A. (NGU). Gas drift during velocity-selective excitation. ZTEFA, no. 6, 1984, 1193-1195.
594. Valyanskiy, S.I.; Vereshchagin, K.A.; Volkov, A.Yu.; Pashinin, P.P.; Smirnov, V.V.; Fabelinskiy, V.I. (IOF). Study on the kinetics of the distribution function of nitrogen molecules by their vibrational and rotational states under pulsed discharge excitation and in a biharmonic field. Measurement of the rate constant of V-V exchange. IOF. Preprint, no. 109, 1984, 48 p.
595. Volkov, S.Yu.; Kozlov, D.N.; Malikov, M.R.; Otlivanchik, Ye.A.; Smirnov, V.V. (IOF). Highly sensitive high-resolution pulsed coherent anti-Stokes Raman spectrometer. IOF. Preprint, no. 123, 1984, 15 p.

596. Voytovich, A.P.; Mashko, V.V. (). Sensitivity of phase-polarization intracavity laser absorption spectroscopy at different values of the linear dichroism of the resonator. OPSPA, v. 56, no. 6, 1984, 1088-1092.

597. Zharov, V.P. (MVTU). Laser spectrophone. OTIZD, no. 15, 1984, 1087842.

J. BEAM-TARGET INTERACTION

1. Miscellaneous Targets

598. Benken, A.A.; Mikhaylov, V.N.; Stasel'ko, D.I. (). The destruction of the centers of a latent image by intense long wavelength radiation at the electron stage of their formation. PZTFD, no.9, 1984, 569-572.

599. Butusov, M.M.; Shitov, V.G. (). Classification of diffraction optical elements. OPSPA, v.56, no.5, 1984, 932-933.

600. Glebovskiy, A.A.; Moiseyenko, I.F.; Lisachenko, A.A. (NIIFL). Photoinduced thermally non-equilibrium desorption from zinc oxide under laser excitation. PZTFD, no. 12, 735-738.

601. Karyagin, S.N.; Kashkarov, P.K.; Kiselev, V.F.; Petrov, A.V. (). EPR study on defect formation on a silicon surface under laser irradiation. Poverkhnost': Fizika, khimiya, mekhanika, no. 2, 1984, 113-115. (RZFZA, 84/5Ye879).

602. Khapalyuk, A.P. (). Conditions for optical cooling. Three-level model. OPSPA, v. 56, no. 5, 1984, 889-893.

603. Khrimyan, A.A.; Tadevosyan, A.A.; Tatevosyan, Yu.V.; Levonyan, T.A. (YeGU). Study on the optical hardness of LiF crystals under the action of laser radiation. YeGU. Uchenyye zapiski. Yestestvennyye nauki, no. 2, 1983, 73-78. (RZFZA, 84/6L1067).

604. Kotlyarov, V.P.; Kovalenko, V.S.; Anyakin, N.I. (). Laser device for processing precise apertures. EOBMA, no. 3, 1984, 78-81.

605. Lakhtin, Yu.M.; Kogan, Ya.D.; Podrugin, V.N.; Buryakin, A.V. (). Energy absorption during chemico-thermal processing of materials. EOBMA, no. 3, 1984, 57-60.

606. Mazhukin, V.I.; Samokhin, A.A. (FIAN). Radiation-induced vaporization kinetics from a surface into a vacuum. FIAN. Preprint (in English), no. 170, 1984, 18 p.
607. Migunov, L. (). Combatting ballistic missiles. TVOOB, no. 6, 1982, 16-22, 138-139.
608. Okorokov, L.V.; Rykalin, N.N.; Smurov, I.Yu.; Uglov, A.A.; Khalboshin, A.P. (). Cutter for laser-mechanical processing. OTIZD, no. 17, 1984, 1090508.
609. Rassokha, A.A. (KhAI). Laser destruction of composite materials. MKMAD, no. 3, 1984, 462-465.
610. Tochilkin, V.A. (OFTNM). Model for the formation of a vapor-gas channel during beam welding. FKOMA, no. 3, 1984, 128-132.
611. Turi, Z.R. (). Laser materials processing and possibilities of its application in precision mechanics. FNMKA, no. 12, 1983, 361-366, 370, 381. (RZRAB, 84/6Ye615).
612. Veyko, V.P.; Kaydanov, A.I.; Libenson, M.N.; Yurkevich, B.M.; Yakovlev, Ye.B. (). Damage to absorptive films under the action of laser radiation. EOBMA, no. 6, 1983, 23-26. (RZRAB, 84/5Ye634).
613. Yemel'yanov, V.I.; Seminogov, V.N. (MGU). The excitation of bound capillary waves, diffracted electromagnetic waves, and surface structures for the action of powerful electromagnetic radiation on liquid metals, semiconductors, and dielectrics. KVEKA, no. 5, 1984, 871-873.

## 2. Metal Targets

614. Ageyev, L.A.; Miloslavskiy, V.K. (KhGU). The properties of a TE-diffraction grating photoinduced in thin AgCl-Ag films. ZTEFA, No.5, 1984, 888-895.
615. Andreyeva, L.I.; Benditskiy, A.A.; Viduta, L.V.; Granovskiy, A.B.; Kulyupin, Yu.A.; Makedontsev, M.A.; Rukman, G.I.; Stepanov, B.M.; Fedorovich, R.D.; Shoytov, M.A.; Yuzhin, A.I. (). Emission of electrons under the effect of CO<sub>2</sub> laser radiation on island metal films. FTVTA, no. 5, 1984, 1519-1520.

616. Arutyunyan, R.V.; Baranov, V.Yu.; Bol'shov, L.A.; Gorlenkov, A.N.; Dolgov, V.A.; Mezhevov, V.S. (). Ejection of material from a solid target during the combined action of two laser pulses of different durations. KVEKA, no.6, 1984, 1220-1224.
617. Ben'kov, A.V.; Zinov'yev, A.V.; Usmanov, T. (IEANUZ). The luminescence of a metal surface excited by laser pulses of different durations. PZTFD, no.11, 1984, 689-692.
618. Germanovich, V.I.; Tochitskiy, E.I.; Chaplanov, A.M. (). Formation of pores in nickel films under laser irradiation. IZNMA, no. 2, 1984, 180-181. (RZFZA, 84/6Yell09).
619. Glytenko, A.L.; Shmakov, V.A. (). The formation and growth of a new phase in a metal melted by a laser pulse. DANKA, v. 276, no. 6, 1984, 1392-1396.
620. Grigor'yants, A.G.; Safonov, A.N.; Makusheva, N.A.; Tarasenko, V.M. (). Laser hardening of internal combustion engine component surfaces. TEOPA, no. 2, 1984, 50-52.
621. Kalagin, A.P.; Toropkin, G.N. (GOI). Evaluating the probabilities for thermal destruction of active elements in pulsed lasers. OPMPA, no. 5, 1984, 4-7.
622. Klebanov, Yu.D. (OFTNM). Regimes for rendering metallic surfaces amorphous during continuous scanning by laser. FKOMA, no. 3, 1984, 25-32.
623. Koltok, Yu.V.; Latynin, Yu.M. (KhGU). An investigation of the e.m.f. generated by acoustic waves excited in magnetic materials by a laser beam. AKZHA, v.30, no.3, 1984, 331-334.
624. Kopriva, M. (). Laser welding in instrument manufacture. JMkoa, no. 11, 1983, 328-329. (RZRAB, 84/5Ye560).
625. Kovalenko, V.S.; Dyatel, V.P. (). Dynamic electrolaser destruction of metallic materials. EOBMA, no. 3, 1984, 15-18.
626. Kovalenko, V.S.; Dyatel, V.P. (). Laser processing of apertures in curved tubes. TEOPA, no. 2, 1984, 46-47.
627. Kung, J. (). Cutting head for a laser metal processing tool. Author's certificate Czechoslovakia, no. 204700, 1 Jul 1983. (RZRAB, 84/6Ye597).

628. Kvasnitskiy, V.F. (). Welding by light beam. Subchapter in book: Spetsial'nyye sposoby svarki i payka v sudostroyenii (Special methods for welding and brazing in shipbuilding). Leningrad, Sudostroyeniye, 1984, 97-107.
629. Metaksa, G.P. (KazPI). The effect of the action of electromagnetic oscillations on a zinc-aluminum alloy under plastic deformation. ZTEFA, no. 5, 1984, 985-988.
630. Moryashchev, S.F.; Voinov, S.S. (). Effect of the hardening routine on the fatigue limit and wear resistance of steel. Poverkhnost': Fizika, khimiya, mekhanika, no. 2, 1984, 138-142. (RZRAB, 84/5Ye554).
631. Naderi, H.; Sashalmi, J. (). Thermal efficiency of e-beam and laser welding. FNMKA, no. 11, 1983, 325-328,4. (RZRAB, 84/5Ye562).
632. Safonov, A.N.; Grigor'yants, A.G.; Tarasenko, V.M.; Ovcharova, L.G.; Baskov, A.F. (). Study on the structure of steel during hardening and surface doping by c-w lasers. IVUSA, no. 5, 1984, 94-98.
633. Uglov, A.A.; Grebennikov, V.A. (OFTNM). The nature of destruction of porous metals by laser radiation. FKOMA, no.3, 1984, 21-24.
634. Uglov, A.A.; Kul'batskiy, Ye.B. (IMET). The instability of the shape of a copper surface reconstructed from cuprous oxide in hydrogen under laser irradiation. PZTFD, no.11, 1984, 658-662.
635. Vedenov, A.A.; Gladush, G.G. (OFTNM). The effects of the hydrodynamics of melting on the effectiveness of treating materials by pulsed laser radiation. FKOMA, no.3, 1984, 12-20.
636. Zhizhin, G.N.; Kiselev, S.A.; Moskaleva, M.A.; Silin, V.I.; Yakovlev, V.A. (ISAN). The effect of interference on the beam pattern for boundary detachment of a surface electromagnetic wave in the infrared range. ZTEFA, no.5, 1984, 975-977.

### {3. Dielectric Targets

637. Zinchenko, V.I.; Imas, Ya.A.; Kaporskiy, L.N. (). The surface breakdown of a quartz glass at elevated temperatures. ZTEFA, no.5, 1984, 989-990

#### {4. Semiconductor Targets

638. Andreyev, V.M.; Saradzhishvili, N.M.; Fedorova, O.M.; Shamukhamedov, Sh.Sh. (FTI). Thin-film AlGaAs heterophotoelements with a detached GaAs substrate. ZTEFA, no.6, 1984, 1215-1218.
639. Avdzhyan, K.E.; Aleksanyan, A.G.; Belluyan, N.Sh.; Kazaryan, R.K.; Matevosyan, L.L. (IRFEANArm). Quantum size effects in the periodic structure of InSb-GaAs and in Ga(x)In(1-x)As(y)Sb(1-y) films obtained by laser sputtering. KVEKA, no.6, 1984, 1264-1266.
640. Baltrameyunas, R.; Veletskas, D.; Kapturauskas, I. (VilGU). The self-action of powerful light beams in CdSe crystals. PZTFD, no.9, 1984, 522-526.
641. Boldyrevskiy, P.B.; Danil'tsev, V.M.; Krasnov, A.A.; Obolenskiy, B.A. (OPTNM). The properties of gallium arsenide under laser radiation with a wavelength of 1.06 microns. FKOMA, No.3, 1984, 33-35.
642. Gasan-zade, S.G.; Romaka, V.A.; Sal'kov, Ye.A.; Shepel'skiy, G.A. (IPANUK). The photoconductivity of a gapless semiconductor during the formation of an energy gap. ZFPRA, v.39, no.12, 1984, 553-556.
643. Gavrilenko, V.I.; Zuyev, V.A.; Kalandadze, T.M.; Litovchenko, V.G.; Popov, V.G. (IPANUK; KVTU). Optical characteristics of doped silicon films. IVUFA, no. 5, 1984, 40-43.
644. Gayduk, P.I.; Komarov, F.F.; Solov'yev, V.S. (). Structure and electrophysical properties of ion-doped SiSb after pulsed laser annealing. VBSFA, no. 6, 1983, 97-100. (RZFZA, 84/5Ye877).
645. Khvostikova, V.D.; Vasil'yevskaya, N.I.; Sorokina, L.B.; Polygalov, G.A. (MIEM). Dislocation structure of Si, Ge and GaAs irradiated by a Q-switched laser. VINITI. Deposit, no. 1509-84, 16 Mar 1984, 4 p. (RZFZA, 84/6Ye1091).
646. Koren', N.N.; Gremenok, V.F.; Moiseyenko, V.V. (). Study on the process for obtaining ZnSe films by pulsed laser vaporization. VBSFA, no. 6, 1983, 81-84. (RZFZA, 84/5Ye164).
647. Kovalev, V.I.; Musayev, M.A.; Fayzullov, F.S. (FIAN). Surface breakdown and nonlinear absorption in semiconductors during the action of radiation from a pulsed CO2 laser. KVEKA, no.5, 1984, 989-993.



648. Lebedeva, N.I.; Mesyats, G.A. (). Annealing of semiconductors by low-energy e-beam pulses. Sil'notochnyye impul'snyye elektronnyye puchki v tekhnologii. Novosibirsk, 1983, 39-55. (RZFZA, 84/5Ye876).
649. Mojzes, I.; Veresegyhazy, R.; Obodnikov, V.; Vaylin, Yu.; Vasil'yev, S. (). Mapping the redistributed components of the Au-Ge/GaAs system after scanning annealing. PSSAB, v. A80, no. 1, 1983, K33-K36. (RZFZA, 84/5Ye885).
650. Rumyantsev, V.D.; Saradzhishvili, N.M. (FTI). Effectiveness of the photoelectric conversion of short pulses of radiation. ZTEFA, no.5, 1984, 979-982.
651. Suslov, I.M. (FIAN). A possible mechanism for laser annealing. ZFPRA, v. 39, no. 12, 1984, 547-550.
652. Valyavko, V.V.; Kevorkov, M.N.; Osipov, V.P.; Popkov, A.N. (). Radiation resistance of InSb at 10.6 um. VBSFA, no. 6, 1983, 62-65. (RZFZA, 84/5L1046).
653. Vasil'yevskaya, N.I.; Kudrina, L.V.; Smirnov, I.S.; Khvostikova, V.D. (MIEM). Shockwave damage to semiconductor single crystals. VINITI. Deposit, no. 1508-84, 16 Mar 1984, 6 p. (RZFZA, 84/6Yel090).
654. Violin, E.Ye.; Voron'ko, O.N.; Noybert, F.; Potapov, Ye.N. (LETI). Effect of pulsed laser irradiation on the properties of implanted layers of silicon carbide. FTPPA, no. 5, 1984, 954-956.
655. Yablonskiy, G.P. (IFANB). Laser annealing of lattice defects in ZnSe crystals. FTPPA, no. 5, 1984, 918-920.
656. Zybtshev, S.G.; Sheftal', R.N. (IRE). Decreasing the temperature for formation of Si single crystal films during irradiation of the substrate surface with pulsed light. MKETA, no. 3, 1984, 276-277.
- K. PLASMA GENERATION AND DIAGNOSTICS
657. Afanas'yev, Yu.V.; Isakov, V.A. (FIAN). Energy estimate of combined heating of thermonuclear targets. FIAN. Preprint, no. 114, 1984, 10 p.

658. Aleksandrova, I.V.; Allin, A.P.; Basov, N.G.; Borisenko, N.G.; Bochkarev, V.N.; Bykovskiy, N.Ye.; Valuyev, A.D.; Vasin, B.L.; Galichiy, A.A.; Goetz, K. (Getts, K.); Huenckel, H. (Gunkel', Kh.); Danilov, A.Ye.; Ivanov, V.V.; Ivanov, B.Yu.; Isakov, A.I.; Kalashnikov, M.P.; Kruglov, B.V.; Kusch, S. (Kush, S.); Koresheva, Ye.R.; Mazur, M.Yu.; Maksimchuk, A.M.; Merkul'yev, Yu.A.; Mikhaylov, Yu.A.; Nikitenko, A.I.; Orlov, V.V.; Osetrov, V.P.; Puzyrev, V.N.; Rode, A.V.; Ricker, R. (Riker, R.); Savchenko, S.M.; Sklizkov, G.V.; Senatskiy, Yu.V.; Solodkov, V.M.; Subbotin, L.K.; Fedotov, S.I.; Foerster, E. (Ferster, E.); Tsvetkov, M.Yu.; Tsygankov, A.A.; Chaushanskiy, S.A.; Shelobolin, A.V.; Schoennagel, H. (Shennagel', Kh.); Shishkina, L.I.; Junge, K. (Yunge, K.). (FIAN). Study on the Del'fin-1 laser plasma system. FIAN. Preprint, no. 207, 1984, 44 p.
659. Andreyev, N.Ye. (FIAN). Dynamic theory of the interaction of high-power radiation with a plasma. FIAN. Dissertation, 1984, 46 p.
660. Apollonov, V.V.; Bunkin, F.V.; Derzhavin, S.I.; Prokhorov, A.M.; Sirotkin, A.A.; Firsov, K.N. (IOF). A quasi-continuous lasing regime in a He:Xe optical breakdown plasma. PZTFD, no.9, 1984, 562-565.
661. Arslanbekov, T.U.; Mezrin, O.A.; Mikhaylova, T.I.; Pazderskiy, V.A.; Khabibullayev, P.K. (OTANUZ). Acceleration of electrons formed from the focusing of laser radiation in a gas. KVEKA, no. 6, 1984, 1123-1128.
662. Asrorov, A.A.; Abdullayev, A.Sh. (). Parametric generation of spontaneous magnetic fields in a plasma interacting with relativistic e-m radiation. VINITI. Deposit, no. 1404-84, 14 Mar 1984, 11 p. (RZFZA, 84/6G67).
663. Asrorov, A.A.; Abdullayev, A.Sh. (). Self-focusing of an e-m beam in a plasma due to an inverse Faraday effect. VINITI. Deposit, no. 1407-84, 14 Mar 1984, 15 p. (RZFZA, 84/6G83).
664. Asrorov, A.A.; Abdullayev, A.Sh. (). Spontaneous magnetic fields in a relativistic electron-photon gas. VINITI. Deposit, no. 1406-84, 14 Mar 1984, 8 p. (RZFZA, 84/6G27).
665. Asrorov, A.A.; Abdullayev, A.Sh. (). Theory of an inverse Faraday effect in a collisionless plasma. VINITI. Deposit, no. 1405-84, 14 Mar 1984, 12 p. (RZFZA, 84/6G82).

666. Averin, V.V. (OFTNM). Fourth All-Union Conference on Plasma Processes in the Metallurgy and Technology of Inorganic Materials, Moscow, 4-6 Oct 1983. FKOMA, no. 3, 1984, 143.
667. Avrorin, Ye.N.; Bunatyan, A.A.; Gadzhiyev, A.D.; Mustafin, K.A.; Nurbakov, A.Sh.; Pisarev, V.N.; Feoktistov, L.P.; Frolov, V.D.; Shibarshov, L.I. (IAE; ChelTI). Numerical calculations of a thermonuclear detonation in a dense plasma. FIPLD, no. 3, 1984, 514-521.
668. Barkhudarov, E.M.; Berezhetskaya, N.K.; Bol'shakov, Ye.F.; Dorofeyuk, A.A.; Yeletskiy, A.V.; Kossyy, I.A.; Taktakishvili, M.I. (IOF). A ring source of dense, collisionless plasma and of ionizing radiation. ZTEFA, no.6, 1984, 1219-1222.
669. Basov, N.G.; Gus'kov, S.Yu.; Danilova, G.V.; Demchenko, N.N.; Zmitrenko, N.V.; Karpov, V.Ya.; Mishchenko, T.V.; Rozanov, V.B.; Samarskiy, A.A. (FIAN). Thermonuclear yield of short-wave ( $\lambda$  equal to or less than 1  $\mu$ m) high-power laser targets. FIAN. Preprint (in English), no. 256, 1984, 10 p.
670. Bedilov, M.R.; Khabibullayev, P.K.; Sabitov, M.S. (). Self-focusing of multicharged ions in a laser plasma. DANUA, no. 9, 1982, 18-19. (RZFZA, 84/6L1058).
671. Beglyakov, N.N.; Besspalov, D.F.; Vergun, I.I.; Dilyuk, A.A.; Pleshakova, R.P.; Shikanov, A.Ye.; Kirillov-Ugryumov, M.V.; Prorvich, V.A.; Bogatyrev, G.V. (MIFI). Study on the parameters of a monitor with a highly sensitive activation neutron detector, by means of a laser neutron tube. PRTEA, no. 3, 1984, 27-30.
672. Belousov, V.I. (). State of the art laser plasma mass spectroscopy: a quantitative method for elemental analysis. ZAKHA, no. 5, 1984, 909-927.
673. Berezhetskaya, N.K.; Bol'shakov, Ye.F.; Dorofeyuk, A.A.; Zhletskiy, A.V.; Kossyy, I.A.; Barkhudarov, E.M.; Taktakishvili, M.I. (FIAN). Source for a dense collisionless plasma and ionizing radiation. FIAN. Preprint, no. 244, 1983, 28 p. (RZFZA, 84/5G488).
674. Borovskiy, A.V.; Korobkin, V.V.; Mukhtarov, Ch.K. (IOF). Amplification of light at transitions of H ions during free disintegration of thin plasma clusters in a cylindrical configuration. Two-pulse pumping. IOF. Preprint, no. 159, 1984, 18 p.

675. Borovskiy, A.V.; Korobkin, V.V.; Mukhtarov, Ch.K. (IOF). Amplification of light at transitions of H ions during free disintegration of thin plasma clusters in a cylindrical configuration. Disintegration allowing for recombination heating of the plasma. IOF. Preprint, no. 158, 1984, 26 p.
676. Boyko, V.A.; Koldashov, G.A.; Fayenov, A.Ya.; Fedosimov, A.I.; Tsigler, I.N. (VNIFTRI). Ruby laser with multiple sequential wavefront reversal for obtaining a high-temperature plasma. PRTEA, no. 3, 1984, 188-190.
677. Bykovskiy, Yu.A.; Mironov, V.Ye.; Sarantsev, V.P.; Sil'nov, S.M.; Sotnichenko, A.A.; Shestakov, B.A. (OIYaI). Use of a laser plasma for diagnostics of pulsed atomic fluxes. OIYaI. Preprint, no. 13-83-807, 1983, 10 p. (KNLTA, 20/84, 17366).
678. Dubinina, Ye.A.; Urusova, N.A.; Faynshteyn, S.M. (GPI). Explosive instability of high-power e-m waves in plasma. IVYRA, no. 6, 1984, 697-704
679. Golubev, A.A.; Krechet, K.I.; Latyshev, S.V.; et al. (ITEF). Formation of the charged ion spectrum of a laser plasma from gas targets. ITEF. Preprint, no. 175, 1983, 7 p. (KNLTA, 26/84, 22287).
680. Gorbulin, Yu.M.; Zlotnikov, D.M.; Znamenskaya, I.A.; Znamenskiy, N.V.; Kalinin, Yu.G.; Skoryupin, V.A.; Shashkov, A.Yu. (). A shadow method for investigating a plasma in the infrared range, using up-conversion. PZTFD, no.9, 1984, 555-559.
681. Gribkov, V.A.; Dubrovskiy, A.V.; Kalachev, N.V.; Krokhin, O.N.; Silin, P.V.; Nikulin, V.Ya.; Cheblukov, Yu.N. (FIAN). Plasma focusing as a source of heavy ions for controlled thermonuclear fusion. KRSFA, no. 6, 1984, 55-58.
682. Gutarev, Yu.V.; Dikiy, A.G.; Kryshchal', P.G.; Letuchiy, A.N.; Pavlichenko, O.S. (KhFTI). Local measurements of the hydrogen atom density in the URAGAN-2 stellarator. FIPLD, no. 3, 1984, 635-637.
683. Kalashnikov, M.P.; Maksimchuk, A.M.; Mikhaylov, Yu.A.; Rode, A.V.; Sklizkov, G.V.; Fedotov, S.M. (FIAN). Spherical mirror for transmitting images in the vacuum UV. FIAN. Preprint, no. 118, 1984, 34 p.

684. Kladov, S.V.; Smirnova, A.D. (FIAN). Submillimeter interferometer system for measuring the radial profile of plasma density in the L-2 stellarator. ZTEFA, no. 6, 1984, 1101-1106.
685. Konov, V.I.; Nikitin, P.I.; Prokhorov, A.M.; Silenok, A.S. (IOF). The generation of magnetic fields and currents during the optical discharge in a recombining plasma. ZFPRA, v. 39, no. 11, 1984, 501-504.
686. Konov, V.I.; Silenok, A.S. (IOF). Study on pulsed optical discharges in side ejection operating modes. IOF. Preprint, no. 124, 1984, 25 p.
687. Mironov, V.Ye.; Sil'nov, S.M.; Sotnichenko, Ye.A.; Shestakov, B.A. (OIYaI). Experimental use of the KUTI-20 and PKUTI laser source of atoms. OIYaI. Soobshcheniye, no. 9-83-837, 1984, 8 p. (KNLTA, 25/84, 21531).
688. Silin, V.P. (FIAN). Absorption of radiation by a turbulent laser plasma. FIAN. Preprint, no. 119, 1984, 73 p.
689. Volenko, V.V.; Zapysov, A.L.; Zuyev, A.I.; Ivanov, A.F.; Izrailev, I.M.; Kryuchenkov, V.B.; Lykov, V.A.; Osadchuk, L.A.; Podgornov, V.A. (). An investigation of the dynamics of shell SiO<sub>2</sub> targets in experiments on the "Sokol" apparatus. KVEKA, no. 6, 1984, 1179-1183.
690. Zakharov, S.M.; Ivanenkov, G.V.; Kolomenskiy, A.A.; Pikuz, S.A.; Samokhin, A.I. (FIAN). Pinching a laser jet plasma in the diode of a heavy current accelerator. FIPLD, no.3, 1984, 522-528.
691. Zinov'yev, V.Ye.; Zagrebin, L.D.; Petrova, L.N.; Sipaylov, V.A. (IMI). Electrical resistance and thermophysical properties of solid solutions of germanium in iron. IVUFA, no. 6, 1984, 36-41.

### III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

692. All-Union Conference: Laser Optics, 4th, Leningrad, 13-18 Jan 1984. Summaries of the reports. CVKOLaze, 4th, Leningrad, 13-18 Jan 1984. Tezisy dokladov. GOI. Leningrad, 1983, 405 p. (RZFZA, 84/6L811).
693. Arays, Ye.A.; Yakovlev, N.Ye. (authors); Zuyev, V.Ye. (ed). (IOA). System of collective use in the automation of atmospheric optical research. Sistema kollektivnogo pol'zovaniya v avtomatizatsii atmosferno-opticheskikh issledovaniy. Novosibirsk, Nauka, 1984, 145 p.
694. Bakirov, M.Ya. (). Semiconductor radiation detectors. Poluprovodnikovyye priyemniki izlucheniya. Baku, Elm, 1983, 137 p. (RZFZA, 84/6L607).
695. Bogdanov, K.M.; Yanovskiy, K.A.; Kozlov, Yu.G.; Panteleyev, B.P.; Shikher, V.I.; Em, V.S. (authors); Yanovskiy, K.A. (ed). (). Optostructural computer-aided image analysis. Optiko-strukturnyy mashinnyy analiz izobrazheniy. Moskva, Mashinostroyeniye, 1984, 280 p.
696. Borisova, Z.U. (LGU). Chalcogenide semiconductor glasses. Khal'kogenidnyye poluprovodnikovyye stekla. LGU. Leningrad, 1983, 344 p. (RZFZA, 84/6Ye18).
697. Butkovskiy, A.G.; Samoilenko, Yu.I. (). Control of quantum mechanical processes. Upravleniye kvantovomekhanicheskimi protsessami. Moskva, Nauka, 1984, 256 p.
698. Devyatkov, N.D. (ed). (). New methods for designing electrooptic systems. Novyye metody rascheta elektronno-opticheskikh sistem. Moskva, Nauka, 1983, 238 p. (RZFZA, 84/5Zh467).
699. Galejev, A.A.; Sudan, R.M. (eds). (). Fundamentals of plasma physics. Vol. 2. Osnovy fiziki plazmy. Tom 2. Moskva, Energoatomizdat, 1984, 631 p. (RZFZA, 84/6G11).
700. Gul'kov, V.N.; Zaytsev, V.A.; Kropotkin, M.A.; Pashchenko, Ye.G.; Tikhonov, V.V. (authors); Pashchenko, Ye.G. (ed). (). Optophysical means for studying the ocean. Optiko-fizicheskiye sredstva issledovaniya okeana. Series: Tekhnika osvoyeniya okeana (Ocean reclamation technology). Leningrad, Sudostroyeniya, 1984, 264 p.

701. Il'in, V.P. (ed). (VTsSOAN). Algorithms and methods for designing electrooptical systems. Algoritmy i metody rascheta elektronno-opticheskikh sistem. TsSOAN. Novosibirsk, 190 p. (KNLTA, 24/84, 20723).
702. Instruments of precision mechanics. Pribory tochnoy mekhaniki. VZMI. Moskva, 1983, 139 p. (RZFZA, 84/6A49).
703. Ivanov, V.I.; Aksenov, A.I.; Yushin, A.M. (authors); Goryunov, N.N. (ed). (). Semiconductor optoelectronic instruments. Poluprovodnikovyye optoelektronnyye pribory. Moskva, Energoatomizdat, 1984, 185 p. (KNLTA, 26/84, 22421).
704. Katyshev, Yu.V.; Novikov, D.L.; Polferov, E.A. (). English-Russian high-energy physics dictionary. Anglo-russkiy slovar' po fizike vysokikh energiy. 2nd edition revised and enlarged, Moskva, Russkiy yazyk, 1984, 400 p. (KNLTA, 20/84, 17395).
705. Kondilenko, I.I., Korotkov, P.A.; Khizhnyak, A.I. (). Laser physics. Fizika lazerov. Kiyev, Vishcha shkola, 1984, 232 p. (UFNAA, v. 144, no. 3, 1984, 539).
706. Koval'skiy, N.G. (ed). (IAE). Interaction of radiation from plasma and electron flows with matter. Interdisciplinary scientific and technical conference, Moscow, 21-24 Feb 1984. Summaries of the reports. CMNTKVIP, Moskva, 21-24 Feb 1984. Tezisy dokladov. IAE. TsNIiatominform. Moskva, 1984, 158 p. (RZFZA, 84/6Ye986).
707. Kozachok, A.G. (). Holographic methods for research in experimental mechanics. Golograficheskiye metody issledovaniya v eksperimental'noy mekhanike. Moskva, Mashinostroyeniye, 1984, 176 p.
708. Kremer, I.Ya. (ed). (). Space-time signal processing. Obrabotka prostranstvenno-vremennykh signalov. VGU. Voronezh, 1983, 140 p. (RZFZA, 84/6A50).
709. Kulagin, S.V.; Gomenyuk, A.S.; Dikarev, V.N.; Zubarev, V.Ye.; Lebedev, Ye.N.; Mosyagin, G.M. (). Optomechanical instruments. Optiko-mekhanicheskiye pribory. 2nd edition revised and enlarged. Moskva, Mashinostroyeniye, 1984, 352 p.
710. Lamekin, V.F.; Savrasov, A.S.; Pashchenko, Ye.G. (). Optical electronics in marine engineering. Opticheskaya elektronika v sudovoy tekhnike. Leningrad, Sudostroyeniye, 1984, 216 p.

711. Laser optical and spectral instrument manufacture. Republic scientific and technical school seminar. Papers. CRNTShSL. Materialy. Minsk, 1983, 225 p. (RZFZA, 84/6L532).
712. Lebed'ko, Ye.G.; Porfir'yev, L.F.; Khaytun, F.I. (). Theory and design of pulsed and digital optoelectronic systems. Teoriya i raschet impul'snykh i tsifrovyykh optiko-elektronnykh sistem. Leningrad, Mashinostroyeniye, 1984, 191 p.
713. Maksutov, D.D. (). Fabrication and study of astronomic optics. Izgotovleniye i issledovaniye astronomicheskoy optiki. 2nd edition. Moskva, Nauka, 1984, 272 p.
714. Makushkin, Yu.S. (ed). (). Optoacoustic method in laser spectroscopy of molecular gases. Optiko-akusticheskiy metod v lazernoy spektroskopii molekulyarnykh gazov. Novosibirsk, Nauka, 1984, 128 p. (UFNAA, v. 144, no. 3, 536).
715. Manasyan, N.S. (compiler). (). Concise English-Russian dictionary of frequently used terms on quantum generators. Chastotnyy anglo-russkiy slovar'-minimum po kvantovym generatoram. Moskva, Voenizdat, 1983, 272 p.
716. Manykin, E.A.; Samartsev, V.V. (authors); Akhmanov, S.A. (ed). (KazFTI). Optical echo spectroscopy. Opticheskaya ekho-spektroskopiya. KazFTI. Moskva, Nauka, 1984, 272 p.
717. Mesyats, G.A. (ed). (). High-current pulsed e-beams in technology. Sil'notochnyye impul'snyye elektronnyye puchki v tekhnologii. Novosibirsk, Nauka, 1983, 169 p. (RZFZA, 84/5Zh466).
718. Miller, T.N. (ed). (). Nitrides: methods of preparation, properties and fields of application. All-Union seminar, 5th. Summaries of the reports. Vols. 1 and 2. CVSNMPSO, 5th. Tezisy dokladov. Riga, Zinatne, 1983. Tom 1, 148 p., Tom 2, 163 p. (RZFZA, 84/6Ye15).
719. Miroshnikov, M.M. (). Theoretical fundamentals of optoelectronic instruments. Teoreticheskiye osnovy optiko-elektronnykh priborov. Leningrad, Mashinostroyeniye, 1983, 696 p. (RZRAB, 84/5Ye6).
720. Molebnyy, V.V. (). Optical ranging systems. Optiko-lokatsionnyye sistemy. Moskva, Mashinostroyeniye, 1981, 181 p.



721. Neumyvakin, Yu.K.; Perskiy, M.I.; Zakharenko, M.A.; Fedorov, A.S. (). Automation of geodetic measurements in land reclamation projects. Avtomatizatsiya geodezicheskikh izmereniy v meliorativnom stroitel'stve. Moskva, Nedra, 1984, 126 p.
722. Perinats, T.A.; Vystavkina, G.A. (compilers). (). Laser processing in microelectronics. Lazernaya obrabotka v mikroelektronike. TsNIITEI priboro. Moskva, 1983, 7 p. (Knizhnaya letopis'. Dopolnitel'nyy vypusk. Knigi i broshyuri, 5/84, 7404).
723. Physics of microelectronic instruments. Fizika mikroelektronnykh priborov. MIET. Moskva, 1982, 93 p. (RZFZA, 84/6A48).
724. Polovinko, V.V. (). Remote optical methods for studying the world ocean. Opticheskiye nekontaktnyye metody issledovaniya Mirovogo okeana. Moskva, Nedra, 1984, 166 p.
725. Potekhin, V.A. (ed). (FTI). Optical methods for image and signal processing. Opticheskiye metody obrabotki izobrazheniy i signalov. FTI. Leningrad, 1981, 101 p.
726. Pribylova, Ye.N.; Razumov, V.F.; Slavnova, T.D. (compilers). (). Non-silver and unconventional photographic processes. All-Union conference, 4th, Suzdal', 28 Feb - 2 Mar 1984. Summaries of the reports, in 2 vols. Vol. 1. Plenary reports. Electrophotography. Photothermoplastics. Holographic recording. Parts 1 and 2. Vol. 2. Photochemical processes in information recording. Semiconductor photography. CVKBNFPr, 4th, Suzdal', 28 Feb - 2 Mar 1984. Tezisy dokladov. Tom 1. Plenarnyye doklady. Elektrofotografiya. Fototermoplastika. Golograficheskaya zapis'. Chast' 1. 159 p. Chast' 2. 170 p. Tom 2. Fotokhimicheskiye protsessy registratsii informatsii. Poluprovodnikovaya fotografiya. 233 p. IKhF. NSFPR. Chernogolovka, 1984. (RZRAB, 84/6Ye738,747. KNLTA, 24/84, 21317-19).
727. Radiophysics and spectroscopy. Radiofizika i spektroskopiya. TashGU. Tashkent. UzNIINTI. Deposit, no. 140Uz-D84, 14 Feb 1984, 114 p. (RZRAB, 84/6Ye104).
728. Shestopalov, V.P. (ed). (). Propagation and diffraction of radiowaves in the millimeter and submillimeter ranges. Rasprostraneniye i difraktsiya radiovoln v millimetrovom i submillimetrovom diapazonakh. Kiyev, Naukova dumka, 1984, 300 p.

729. Studies on physical gas dynamics. Issledovaniya po fizicheskoy gazovoy dinamike. KazNIIMM. KaGU. Kazan', 1983, 143 p. (RZFZA, 84/6G470).
730. Tsidelko, V.D.; Nagayets, N.V.; Khokhlov, Yu.V.; Gladkov, A.M.; Teslenko, V.A. (). Design of microprocessor measuring instruments and systems. Proyektirovaniye mikroprotsessornykh ismeritel'nykh priborov i sistem. Kiyev, Tekhnika, 1984, 215 p. (RZFZA, 84/6A52).
731. Use of observations of artificial satellites in geodesy and geophysics. Ispol'zovaniye nablyudeniya iskusstvennykh sputnikov zemli v geodezii i geofizike. Astrosoviet. Nauchnyye informatsii, no. 55, 1982, 180 p.
732. Vanyurikhin, A.I.; Gerchanovskaya, V.P. (). Optoelectronic polarization devices. Optiko-elektronnyye polyarizatsionnyye ustroystva. Kiyev, Tekhnika, 1984, 160 p.
733. Vasil'yev, A.A. (ed). (). All-Union Conference on Charged Particle Accelerators, 8th, Protvino, 19-21 Oct 1982. Proceedings. Vols. 1 and 2. CVSUZCha, 8th, Protvino, 19-21 Oct 1982. Trudy. OIYaI. Dubna, 1983, Tom 1, 361 p., Tom 2, 415 p. (RZFZA, 84/6V364-365).
734. Volkovitskiy, O.A.; Pavlova, L.N.; Petrushin, A.G. (). Optical properties of crystalline clouds. Opticheskiye svoystva kristallicheskikh oblakov. Leningrad, Gidrometeoizdat, 1984, 198 p. (RZFZA, 84/6L771).
735. Zhilich, A.G.; Monozon, B.S. (LGU). Magnetic and electroabsorption of light in semiconductors. Magnitno-i elektropogloshcheniye sveta v poluprovodnikakh. LGU. Leningrad, 1984, 204 p.

#### IV. SOURCE ABBREVIATIONS

(Note: CTC = cover-to-cover translation available)

ABFZA	Analele Universitatii Bucuresti. Fizica
AKZHA	Akusticheskiy zhurnal (CTC)
APYCA	Acta physica et chemica. Szeged
ATPLB	Acta physica polonica. Series A
AVMEB	Avtometriya (CTC)
BWATA	Biuletyn Wojskowej akademii technicznej imię Jaroslawa Dabrowskiego
CMNTKVIP	Mezhotraslevaya nauchno-tekhnicheskaya konferentsiya: Vzaimodeystviye izlucheniya plazmennykh i elektronnykh potokov s veshchestvom
CRNTShSL	Respublikanskaya nauchno-tekhnicheskaya shkola-seminar: Lazernoye opticheskoye i spektral'noye priborostroyeniye
CVKBNFPr	Vsesoyuznaya konferentsiya: Besserebryanyye i neobychnyye fotograficheskiye protsessy
CVKOLaze	Vsesoyuznaya konferentsiya: Optika lazerov
CVShSRMS	Vsesoyuznaya shkola-simpozium po rasprostraneniyu millimetrovykh i submillimetrovykh voln v atmosfere
CVSNMPSO	Vsesoyuznyy seminar: Nitridy: metody polucheniya, svoystva i oblasti primeneniya
CVSPMIVS	Vsesoyuznyy simpozium po problemam modulyarnykh informatsionno-vychislitel'nykh sistem
CVSRVEle	Vsesoyuznyy seminar po relyativistskoy vysokochastotnoy elektronike
CVSUZCha	Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhennykh chastits
DANAA	Akademiya nauk Armyanskoy SSR. Doklady
DANKA	Akademiya nauk SSSR. Doklady (CTC)
DANTA	Akademiya nauk Tadzhikskoy SSR. Doklady

DANUA Akademiya nauk Uzbekskoy SSR. Doklady

DERUD Deponirovannyye nauchnyye raboty (formerly: Deponirovannyye rukopisi. Bibliograficheskiy ukazatel'. Yestyesvennyye i tochnyye nauki, tekhnika)

EKNTB Elektronika (Warsaw)

ELPBA Elektropromishlennost i priborostroene

EOBMA Elektronnaya obrabotka materialov (CTC)

EXPPA Eksperimentelle Technik der Physik

FGVZA Fizika gorennya i vzryva (CTC)

FIPLD Fizika plazmy (Moskva, AN SSSR) (CTC)

FIZSA Fizika v shkole

FKOMA Fizika i khimiya obrabotki materialov

FKSTD Fizika i khimiya stekla (CTC)

FMMTA Fizika metallov i metallovedeniye (CTC)

FNMKA Finomechanika, mikrotehnika (Budapest)

FTPPA Fizika i tekhnika poluprovodnikov (CTC)

FTVTA Fizika tverdogo tela (CTC)

GZKGA Geodeziya i kartografiya (CTC)

HIRAA Hiradastechnika (Budapest)

IANFA Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya (CTC)

IATOA Akademiya nauk Tadzhikskoy SSR. Izvestiya. Otdeleniye fiziko-matematicheskikh i geologo-khimicheskikh nauk

IFAOA Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana (CTC)

IMZGA Akademiya nauk SSSR. Izvestiya Mekhaniki zhidkostey i gazov (CTC)

IVNMA Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy (CTC)

IVUBA	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye (CTC)
IVUFA	Izvestiya vysshikh uchebnykh zavedeniy. Fizika (CTC)
IVUSA	Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye
IVUZB	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVYRA	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika (CTC)
IZNMA	Akademiya nauk SSSR. Izvestiya. Metally (CTC)
IZTEA	Izmeritel'naya tekhnika (CTC)
JMKOA	Jemna mekhanika a optika
KHVKA	Khimiya vysokikh temperatur (CTC)
KNKTA	Kinetika i kataliz (CTC)
KNLTA	Knizhnaya letopis'
KRISA	Kristallografiya (CTC)
KRSFA	Kratkiye soobshcheniya po fizike (CTC)
KVEKA	Kvantovaya elektronika (journal, Moskva) (CTC)
LFSBA	Litovskiy fizicheskii sbornik (CTC)
LZFTA	Akademiya nauk Latvyskoy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk
MKETA	Mikroelektronika (CTC)
MKMAD	Mekhanika kompozitnykh materialov (Riga)
MTRLB	Metrologiya
NAUZA	Nauka i zhizn'
OIPOB	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki (now in two separate journals: OTIZD and POTZD)

OPMPA	Optiko-mekhanicheskaya promyshlennost' (CTC)
OPSPA	Optika i spektroskopiya (CTC)
OTIZD	Otkrytiya, izobreteniya (formerly included in OIPOB)
POLIA	Polimery tvorzywa wieloczasteczkowe
POTZD	Promyshlennyye obraztsy, tovarnyye znaki (formerly included in OIPOB)
PPCNB	Problemy prochnosti (CTC)
PRIRA	Priroda
PRTEA	Pribory i tekhnika eksperimenta (CTC)
PSSAB	Physica status solidi (A). Applied Research (GDR)
PSSBB	Physica status solidi (B). Basic Research (GDR)
PZTFD	Zhurnal tekhnicheskoy fiziki. Pis'ma (CTC)
PZTKA	Przeglad telekomunikacyjny
RAELA	Radiotekhnika i elektronika (journal, Moskva) (CTC)
RATEA	Radiotekhnika (journal, Moskva) (CTC)
RZFZA	Referativnyy zhurnal. Fizika
RZRAB	Referativnyy zhurnal. Radiotekhnika
SAKNA	Akademiya nauk Gruzinskoy SSR. Soobshcheniya
STKRA	Steklo i keramika (CTC)
SUFGA	Godishnik na Sofiiskaya universitet. Fizicheski fakultet
SVETA	Svetotekhnika
TEOPA	Tekhnologiya i organizatsiya proizvodstva
TKHMA	Tekhnika molodezhi
TKTEA	Tekhnika kino i televideniya

TVOOB	Tekhnika i vooruzheniye (CTC)
TVYTA	Teplofizika vysokikh temperatur (CTC)
UFNAA	Uspekhi fizicheskikh nauk (CTC)
UFZHA	Ukrainskiy fizicheskii zhurnal (CTC)
USKHA	Uspekhi khimii (CTC)
VBMFA	Belorusskiy universitet. Vestnik. Seriya 1. Matematika, fizika, mekhanika
VBSFA	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
VMUFA	Moskovskiy universitet. Vestnik. fizika, astronomiya (CTC)
ZAKHA	Zhurnal analiticheskoy khimii (CTC)
ZETFA	Zhurnal eksperimental'noy i teoreticheskoy fiziki (CTC)
ZFKHA	Zhurnal fizicheskoy khimii (CTC)
ZFPRA	Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma (CTC)
ZNOKA	Zhurnal neorganicheskoy khimii (CTC)
ZNPFA	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii (CTC)
ZPMFA	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki (CTC)
ZPSBA	Zhurnal prikladnoy spektroskopii (CTC)
ZRBEA	Zarubezhnaya radioelektronika
ZTEFA	Zhurnal tekhnicheskoy fiziki (CTC)

## V. AUTHOR AFFILIATIONS

### AKIN

Akusticheskiy institut AN SSSR  
Acoustics Institute, Academy of Sciences USSR

### Astrosovet

Astronomicheskiy sovet AN SSSR  
Astronomy Council, Academy of Sciences USSR, Moscow

### AzTI

Azerbaydzhanskiy tekhnologicheskiy institut  
Azerbaijhan Technological Institute, Kirovabad

### BGU

Belorusskiy gos universitet  
Belorussian State University

### BIYeN

Buryatskiy institut yestestvennykh nauk SOAN SSSR  
Buryat Institute of Natural Sciences, Siberian Branch of the  
Academy of Sciences USSR

### BPI

Belorusskiy politekhnicheskiy institut  
Belorussian Polytechnical Institute, Minsk

### ChelTI

Chelyabinskiy tekhnologicheskiy institut  
Chelyabinsk Technological Institute

### CherGPI

Cherpovetskiy gos pedagogicheskiy institut  
Cherpovets State Pedagogical Institute

### ChGU

Chernovitskiy gosudarstvennyy universitet  
Chernovitsy State University

### DGU

Dnepropetrovskiy gosudarstvennyy universitet  
Dnepropetrovsk State University

### FIAN

Fizicheskiy institut im Lebedeva AN SSSR  
Physics Institute imeni Lebedev, Academy of Sciences  
USSR, Moscow

### FMIANUkr

Fiziko-mekhanicheskiy institut AN Ukr SSR  
Physical Mechanical Institute, Academy of Sciences Ukrainian  
SSR, L'vov

### FTI

Fiziko-tekhnicheskiy institut im Ioffe AN SSSR  
Physicotechnical Institute im Ioffe, Academy of  
Sciences USSR, Leningrad

### GEOKhI

Institut geokhimii i analiticheskoy khimii  
Institute of Geochemistry and Analytical Chemistry  
imeni Vernadskiy, Academy of Sciences USSR, Moscow



GGU  
 Gor'kovskiy gos universitet  
 Gor'kov State University

GOI  
 Gosudarstvennyy opticheskiy institut im Vavilova  
 State Optical Institute imeni Vavilov, Leningrad

GPI  
 Gor'kovskiy politekhnicheskiy institut.  
 Gor'kiy Polytechnical Institute.

IAE  
 Institut atomnoy energii im Kurchatova  
 Institute of Atomic Energy imeni Kurchatov, Moscow

IEANBel  
 Institut elektroniki AN BSSR  
 Institute of Electronics, Academy of Sciences  
 Belorussian SSR, Minsk

IEANUz  
 Institut elektroniki AN UzSSR  
 Institute of Electronics, Academy of Sciences  
 Uzbek SSR, Tashkent

IEM  
 Institut eksperimental'noy meteorologii  
 Institute of Experimental meteorology, Obninsk

IFANAz  
 Institut fiziki AN AzSSR  
 Institute of Physics, Academy of Sciences  
 Azerbaydzhan SSR

IFANB  
 Institut fiziki AN BSSR  
 Institute of Physics, Academy of Sciences  
 Belorussian SSR, Minsk

IFANEst  
 Institut fiziki AN EstSSR  
 Institute of Physics, Academy of Sciences Estonian SSR

IFANLi  
 Institut fiziki AN LitSSR  
 Institute of Physics, Academy of Sciences Lithuanian SSR

IFANUk  
 Institut fiziki AN UkrSSR  
 Institute of Physics, Academy of Sciences Ukrainian SSR,  
 Kiev

IFI  
 Institut fizicheskikh issledovaniy AN ArmSSR  
 Institute of Physics Research, Academy of Sciences  
 Armenian SSR

IFP  
 Institut fizicheskikh problem AN SSSR  
 Institute of Problems of Physics, Academy of  
 Sciences USSR

IFPV  
 Institut fiziki poluprovodnikov AN LitSSR  
 Institute of Semiconductor Physics, Siberian Branch  
 Academy of Sciences USSR, Novosibirsk

**IFSOAN**

Institut fiziki SOAN  
Institute of Physics, Siberian Branch Academy of  
Sciences USSR

**IFFT**

Institut fiziki tverdogo tela AN SSSR  
Institute of Solid State Physics, Academy of  
Sciences USSR, Chernogolovka

**IGMANGruz**

Institut gornoy mekhaniki AN GruzSSR  
Institute of Mining Mechanics, Academy of Sciences  
Georgian SSR, Tbilisi

**IIYeIT**

Institut istorii yestestvoznaniya i tekhniki AN SSSR  
Institute of History of natural Science and Technology,  
Academy of Sciences USSR, Moscow

**IKAN**

Institut kristallografii AN SSSR  
Institute of Crystallography, Academy of Sciences  
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USSR, Chernogolovka

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Institut khimii silikatov im Grebanshchikova AN SSSR  
Institute of Silicate Chemistry imeni Grebanshchikov,  
Academy of Sciences USSR, Leningrad

**IMET**

Institut metallurgii im Baykova  
Institute of Metallurgy imeni Baykov, Moscow

**IMI**

Izhevskiy mekhanicheskiy institut  
Izhevsk Mechanical Engineering Institute

**INKh**

Institut neorganicheskoy khimii SOAN  
Institute of Inorganic Chemistry, Siberian Branch  
Academy of Sciences USSR

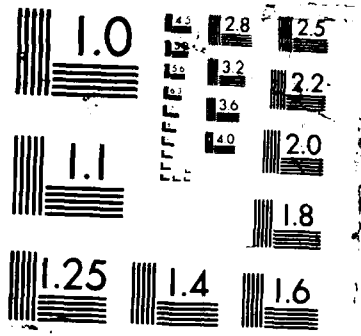
**IOA**

Institut optiki atmosfery SOAN  
Institute of Atmospheric Optics, Siberian Branch  
Academy of Sciences USSR

**IOAN**

Institut okeanologii AN SSSR  
Institute of Oceanography, Academy of Sciences  
USSR, Moscow





IOF  
Institut obshchey fiziki AN SSSR  
Institute of General Physics, Academy of Sciences  
USSR, Moscow

IOKh  
Institut organicheskoy khimii AN SSSR  
Institute of Organic Chemistry, Academy of Sciences  
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IPANUK  
Institut poluprovodnikov AN UkrSSR  
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Institut prikladnoy fiziki AN SSSR  
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IPFANM  
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IRE  
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IRFEANArm  
Institut radiofiziki i elektroniki AN ArmSSR  
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ISAN  
Institut spektroskopii AN SSSR  
Institute of Spectroscopy, Academy of Sciences USSR

ISMSANGruz  
Institut stroitel'noy mekhaniki i seysmostoykosti AN Gruz SSR  
Institute of Structural Mechanics and Seismic Stability,  
Academy of Sciences Georgian SSR

ITEF  
Institut teoreticheskoy i eksperimental'noy fiziki  
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ITF  
Institut teplofiziki SOAN  
Institute of Thermophysics, Siberian Branch Academy of  
Sciences USSR, Novosibirsk

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Institut vysokikh temperatur AN SSSR  
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**IYaFSOAN**

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Sciences USSR, Novosibirsk

**IYaIAN**

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Institute of Nuclear Research, Academy of Sciences  
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**KaGU**

Kazanskiy gos universitet  
Kazan' State University

**KAI**

Kazanskiy aviatsionnyy institut  
Kazan' Aviation Institute

**KaPI**

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Kaunass Polytechnic Institute

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**KGU**

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**KhAI**

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**KhGU**

Khar'kovskiy gos universitet  
Khar'kov State University

**KiGU**

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Kishinev State University

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 Kiyevskiy institut inzhenerov grazhdanskoy aviatsii  
 Kiev Institute of Civil aviation Engineers

**KPIA**  
 Kiyevskiy politekhnicheskiy institut  
 Kiev Polytechnic Institute

**KTILP**  
 Kiyevskiy tekhnologicheskiy institut legkoy  
 promyshlennosti  
 Kiev Technological Institute of Light Industry

**KVTU**  
 Kiyevskoye vyssheye tankovoye uchilishche  
 Kiev Higher Tank College

**LETI**  
 Leningradskiy elektrotekhnicheskiy institut  
 Leningrad Electric Engineering Institute

**LGPI**  
 Leningradskiy gos pedagogicheskiy institut  
 Leningrad State Pedagogical Institute

**LGU**  
 Leningradskiy gos universitet  
 Leningrad State University

**LISI**  
 Leningradskiy inzhenerno-stroitel'nyy institut  
 Leningrad Civil Engineering Institute

**LITMO**  
 Leningradskiy institut tochnoy mekhaniki i optiki  
 Leningrad Institute of Precision Mechanics and Optics

**LIYaF**  
 Leningradskiy institut yadernoy fiziki AN SSSR  
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**LPI**  
 Leningradskiy politekhnicheskiy institut  
 Leningrad Polytechnic Institute

**MEI**  
 Moskovskiy energeticheskiy institut  
 Moscow Power Engineering Institute

**MFTI**  
 Moskovskiy fiziko-tekhnicheskiy institut  
 Moscow Physicotechnical Institute

**MGPI**  
 Moskovskiy gos pedagogicheskiy institut  
 Moscow State Pedagogical Institute

**MGU**  
 Moskovskiy gos universitet  
 Moscow State University

**MIEM**  
 Moskovskiy institut elektronnoy mashinostroyeniya  
 Moscow Institute of Electronic Machinery

**MIET**  
 Moskovskiy institut elektronnoy tekhniki  
 Moscow Institute of Electronic Engineering

MIFI  
Moskovskiy inzhenerno-fizicheskiy institut  
Moscow Engineering Physics Institute

MIIGA  
Moskovskiy institut inzhenerov grazhdanskoy aviatsii  
Moscow Institute of Civil Aviation Engineers

MIIGAik  
Moskovskiy institut inzhenerov geodezii,  
aerofotos"yemki i kartografii  
Moscow Institute of Engineers of Geodesy,  
Aerial Photography and Cartography

MITKhT  
Moskovskiy institut tonkoy khimicheskoy tekhnologii  
imeni Lomonosova  
Moscow Institute of Fine Chemical Technology  
imeni Lomonosov

MMI  
Mogilevskiy mashinostroitel'nyy institut  
Mogilevsk Machine Building Institute

MVTU  
Moskovskoye vyssheye tekhnicheskoye uchilishche im  
Baumana  
Moscow Higher Technical College imeni Bauman

NGU  
Novosibirskiy gos universitet  
Novosibirsk State University

NIFKHi  
NI fiziko-khimicheskoye institut im Karpova  
Scientific Research Institute of Physicochemistry  
imeni Karpov

NIIFL  
NII fiziki pri Leningradskom gos universitete  
Scientific Research Institute of Physics at Leningrad  
State University

NIIFRGU  
NII fiziki Rostovskiy gos universiteta  
Scientific Research Institute of Physics of  
Rostov State University

NIIMF  
NII mekhaniki i fiziki Saratovskogo GU  
Scientific Research Institute of Mechanics and  
Physics of Saratov State University

NIIP  
NII priborostroyeniya  
Scientific Research Institute of Instrument  
Manufacture, Moscow

NIIZhT  
Novosibirskiy institut inzhenerov zheleznodorozhnogo  
transporta  
Novosibirsk Institute of Railroad Transport Engineers



NIKFI

NI kinofotoinstitut  
Scientific Research Institute of Motion Pictures and  
Photography, Moscow

NITsTLAN

NI tsentr po tekhnologicheskim lazeram AN SSSR  
Scientific Research Center for Industrial Lasers,  
Academy of Sciences USSR

NSFPRI

Nauchnyy sovet po probleme "Fotograficheskiye protsessy  
registratsii informatsii" AN SSSR  
Scientific Council on Photographic Processes in  
Information Recording, Academy of Sciences USSR

OFTNM

Otdeleniye fizikokhimii i tekhnologii neorganicheskikh  
materialov AN SSSR  
Department of Physical Chemistry and Technology of  
Inorganic Materials, Academy of Sciences USSR

OIYaI

Ob'yedinennyy institut yadernykh issledovaniy  
Joint Institute of Nuclear Research, Dubna

OTANUZ

Otdel teplofiziki AN UzSSR  
Department of Thermophysics, Academy of Sciences  
Uzbek SSR

RGU

Rostovskiy-na-Donu gos universitet  
Rostov on Don State University

RMI

Rizhskiy meditsinskiy institut  
Riga Medical Institute

SimGU

Simferopol'skiy gos universitet  
Simferopol State University

SKBIRE

Spetsial'noye konstruktorskoye byuro Instituta  
radiotekhniki i elektroniki AN SSSR  
Special Design Bureau of the Institute of  
Radioengineering and Electronics, Academy of  
Sciences USSR

SKTBOPIFANB

Spetsial'noye konstruktorsko-tekhnologicheskoye byuro  
s opytным proizvodstvom Instituta fiziki AN BSSR  
Special Design and Technological Bureau with Trial  
Production of the Institute of Physics, Academy of  
Sciences Belorussian SSR

SNIIE

Sibirskiy NII energetiki  
Siberian Scientific Research Institute of  
Power Engineering, Novosibirsk

**SNIIM**

Sibirskiy gos NII metrologii  
Siberian State Scientific Research Institute of  
Metrology, Novosibirsk

**SykGU**

Syktyvkarskiy gos universitet  
Syktyvkar State University

**TashGU**

Tashkentskiy gos universitet  
Tashkent State University

**ToPI**

Tomskiy politekhnicheskiy institut  
Tomsk Polytechnic Institute

**TsNIIatominform**

TsNII informatsii i tekhniko-ekonomicheskikh  
issledovaniy po atomnoy nauke i tekhnike  
Central Scientific Research Institute of Information  
and Technical Economic Studies on Atomic Science  
and Technology, Moscow

**TsNIIITEIpriboro**

TsNII informatsii i tekhniko-ekonomicheskikh  
issledovaniy priborostroyeniya, sredstv  
avtomatizatsii i sistem upravleniya  
Central Scientific Research Institute of  
Information and Technical Economic Studies on  
Instrument Manufacture, Means of Automation,  
and Control Systems, Moscow

**TyumII**

Tyumenskiy industrial'nyy institut  
Tyumen Industrial Institut

**UDN**

Universitet druzhby narodov im Lumumby  
University of friendship Among Peoples  
imeni Lumumba, Moscow

**UkrNIINTI**

Ukrainskiy NII nauchno-tekhnicheskoy informatsii i  
tekhniko-ekonomicheskikh issledovaniy Gosplana  
UkrSSR  
Ukrainian Scientific Research Institute of Scientific  
and Technical Information and of Technical Economic  
Studies for the State Plan of the Ukrainian SSR, Kiev

**UzNIINTI**

Uzbekskiy NII nauchno-tekhnicheskoy informatsii i  
tekhniko-ekonomicheskikh issledovaniy Gosplana UzSSR  
Uzbek Scientific Research Institute of Scientific and  
Technical Information and of Technical Economic  
Studies for the State Plan of the Uzbek SSR, Tashkent

**VGU**

Voronezhskiy gos universitet  
Voronezh State University

**VilGU**

Vil'nyusskiy gos universitet  
Vilnius State University

Vil'nISI  
 Vil'nysskiy inzhenerno-stroitel'nyy institut  
 Vilnius Civil Engineering Institute

VINITI  
 Vsesoyuznyy institut nauchnoy i tekhnicheskoy  
 informatsii  
 All-Union Institute of Scientific and Technical  
 Information, Moscow

VNIFTRI  
 VNII fiziko-tekhnicheskikh i radiotekhnicheskikh  
 izmereniy  
 All-Union Scientific Research Institute of Physico-  
 technical and Radiotechnical Measurements, Moscow

VNIFTRIKh  
 Khabarovskiy filial VNII fiziko-tekhnicheskikh i  
 radiotekhnicheskikh izmereniy  
 Khabarovsk Branch of the All-Union Scientific  
 Research Institute of Physicotechnical and  
 Radiotechnical Measurements

VNIIITArm  
 VNI proyektno-konstruktorskiy i tekhnologicheskoy  
 institut istochnikov toka. Armyanskoye otdeleniye  
 All-Union Scientific Research, Planning, Design and  
 Technological Institute of Current Sources.  
 Armenian Branch

VNIIMono  
 VNII monokristallov, stsintillyatsionnykh materialov  
 i osobo chistyykh khimicheskikh veshchestv  
 All-Union Scientific Research Institute of Single  
 Crystals, Scintillation Materials and Extra Pure  
 Chemical Substances, Khar'kov

VNIIOFI  
 VNII optiko-fizicheskikh izmereniy  
 All-Union Scientific Research Institute of  
 Optophysical Measurements, Moscow

VNITsISPIV  
 VNI tsentr po izucheniyu svoystv poverkhnosti i vakuuma  
 All-Union Scientific Research Center for Studying the  
 Properties of Surfaces and Vacuums, Moscow

VTsSOAN  
 Vychislitel'nyy tsentr SOAN  
 Computer Center, Siberian Branch Academy of Sciences  
 USSR

VZMI  
 Vsesoyuznyy zaochnyy mashinostroitel'nyy institut  
 All-Union Correspondence Institute of Mechanical  
 Engineering

YeGU  
 Yerevanskiy gos universitet  
 Yerevan State University

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SAVCHUK A I	50	SHIPOV P M	32, 40	SMIRNOVA A D	73
SAVELOV A S	54	SHIPULO G P	20	SMIRNOVA A S	28
SAVEL'YEV I I	14	SHIRMULIS E	55	SMIRNOVA A B	31
SAVILOVA YU I	40	SHISHKINA L I	70	SMOLENSKIY G A	65
SAVIN A A	50	SHITOV V G	64	SMUROV I YU	46
SAVITSKIY I I	24	SHKLOVSKIY YE I	22	SNOPKO V N	26
SAVRASOV A S	75	SHKUNOV V V	37, 40	SOBEL'MAN I I	60
SAVVA V A	58	SHMAKOV V A	66	SOBOL' A A	1
SAZHAYEV V D	2	SHMAL'GAUZEN V I	37	SOBOLEV N N	2
SAZONOV V N	43	SHMAREV YE K	29, 30	SOBOLEV S S	9
SCHHEEL W	30	SHMELEV G M	58	SOBOLEV V A	20
SCHOENNAGEL H	70	SHORYGIN P P	21	SOBOLEVA L V	59
SCHWIND A E	38	SHOYTOV M A	65	SOBOLEVSKIY N M	30
SEDEL'NIKOV A I	62	SHPAK M T	58	SOKHRANSKIY S S	28
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SELIKHOVA YE S	38	SHUBIN B G	8	SOKOLOV V A	57
SEM M F	6	SHUKIROV ZH	60	SOKOLOVA Z N	22
SEMENOV A	51	SHULEV YU V	33, 39	SOKOLOVSKAYA A I	18
SEMENOV L G	17	SHUL'GA A M	63	SOLODKIN YU N	49
SEMENOV N A	29	SHUL'GIN V I	11	SOLODKOV V M	70
SEMINOGOV V N	65	SHUMILIN V P	46	SOLODOV A A	31
SEMKIN R V	8	SHUMOVSKIY A S	19	SOLOUKHIN R I	43
SENATSKIY YU V	70	SHVEDAS I S	15	SOLOV'YEV I A	7
SENDER V R	45	SHVEDOVA L A	5	SOLOV'YEV I A	63
SENDOKOSOV E A	58	SHVEGZHDA ZH L	59, 62	SOLOV'YEV K N	68
SENULENE D B	60	SHVEYGERT V A	15	SOLOV'YEV V S	28
SERAPINAS P D	43	SIDOROV A I	55	SOLYANIK L B	50
SERREZOV V S	10	SIDOROV V G	3, 58	SOMOV S V	19
SERREZOV V S L	20	SIDOROVICH V G	22	SOMS L N	32
SERGEYEV P V	37	SIEJCA A	10	SOROCHKIN G L	12
SERGEYEV S S	53	SIGERT G	20	SOROKA A M	10
SEROV A V	26	SIL'DOS I R	59	SOROKIN A R	36
SHABALOV V V	50	SILENOK A S	73	SOROKIN YU M	68
				SOROKINA L B	68

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SOTNICHENKO YE A	73	TATEVOSYAN YU V	64	TYRYSHKIN I S	54
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SPETSIAN YU V	30	TEL'KOVSKIY V B	54	UCHASTNOV V N	36
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SPLAVNIK YU V	48	TEOLOGOV V V	39	UKRAINTSEV V A	60
STANISHEVSKIY I V	63	TER-MIKAYELIAN M L	20	ULANOVSKIY M V	44
STARIK A M	35	TERLECKI J	15	UMAROV B S	61
STAROSTIN A N	8	TERNOVSKIY V N	26	UMBRASAS A	5
STARTSEV A V	5	TESHABAYEV A T	54	UNISHKOV V A	59
STARUKHIN A S	63	TESLENKO V A	78	URBAZAYEV M N	5
STASEL'KO D I	16, 64	TETEREV N V	2	URUSOVA N A	72
STASYUK I V	20	TIKHOMIROV S V	46	URVACHEV V I	28
STAVROVSKIY D B	12	TIKHOMIROVA O V	34	USATYY A N	58
STEFAN S	34	TIKHONOV V M	39	USMANOV T	66
STEFANOVICH YU T	30	TIKHONOV V N	26	USOSKIN A I	27
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STOYANOVA K B	52	TITOV A N	46	VALYAVKO V V	69
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SUKHAREV B V	31	TRIFONOV A I	15	VATAZHIN A B	11
SUKHAREVA L K	2	TRINCHUK B F	2	VAYLIN YU	69
SUKHOLININ V L	54	TROFIMOV G S	40	VAYTKUS YU	16
SURAN V V	42	TRON'KO V D	40	VEDENOV A A	67
SUROV S P	59	TRUBACHEYEV E A	34	VEKOV I B	14
SUSLOV I M	69	TRUBETSKOY A V	16, 32	VELETSKAB D	68
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SUTYRIN A O	18	TSAR'KOV V A	7	VERESEBYHAZY R	69
SVETASHEV A B	6	TSIBULYA A B	29	VERESHCHAGIN K A	63
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VOLYAR A V	29	YUPUSOV M S	43	ZUBOV V V	11
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VOROB'YEVA L P	6	YUR'YEV M S	9	ZUYEV V S	12
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