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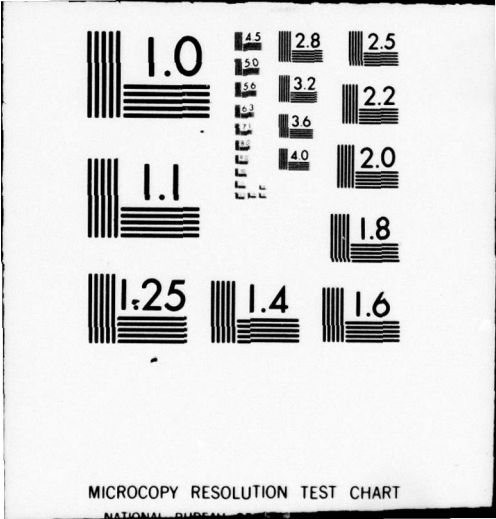
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20. ABSTRACT This is the Soviet Laser Bibliography for January-February 1978 and is no. 33 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear 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; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; beam-target interaction; and plasma generation and diagnostics.		

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 January-February 1978, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are included, as well as entries from the CIRC data base not otherwise covered. Laser items from the popular or semipopular press are generally omitted.

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

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I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Danileyko, Yu.K., A.A. Manenkov, A.M. Prokhorov, and V.Ya. Khaimov-Mal'kov (1). Optical inhomogeneities in ruby crystals. IN: Tr 1, 130-147.
2. Dranov, L.N., D.A. Kichigin, and Yu.P. Popkov (0). Studying ruby rods by a method of electron parametric resonance. Defektoskopiya, no.5, 1977, 108-112.
3. Nasel'skiy, S.P., A.I. Ryabov, L.A. Shaposhnikova, and V.M. Shaposhnikov (0). Interferometric control of temperature change in the refractive index of active laser elements. Deposit at VINITI, no. 4275-77. (ZhPS, v.28, no.1, 1978, 166-167)

2. Crystal: Rare-Earth Activated

a. Nd³⁺

4. Vretenar, P. (Yugoslav). Thin laser coatings consisting of Nd³⁺-doped YAG and silicate glass. Naucno-tehnicki pregled VTI, no.4, 1977, 37-45. (RZhF, 1/78, 1D1231)

b. Er³⁺

5. Antipenko, B.M., and Yu.V. Tomashevich (0). Intensity parameters for Er³⁺, Ho³⁺ and Tm³⁺ in a YAG crystal. OIS, v.44, no.2, 1978, 272-275.
6. Bagdasarov, Kh.S., V.P. Danilov, V.I. Zhekov, T.M. Murina, A.A. Manenkov, M.I. Timoshechkin, and A.M. Prokhorov (1). Pulsed laser using Y₃Al₅O₁₂: Er³⁺ crystals with a high activator concentration under repetitive conditions. KE, no.1, 1978, 150.

3. Crystal: Miscellaneous

7. Arkhangel'skaya, V.A., A.A. Fedorov, and P.P. Feofilov (0). Spontaneous and stimulated radiation of color centers in MeF_2 -Na crystals. OIS, v.44, no.2, 1978, 409-411.
8. Bohm, J., P. Reiche, D. Schultze, B. Hermoneit, H.D. Kuersten, C. Waligora, and R. Vecker (NS). Laser crystal [containing a rare earth and bismuth]. Patent GDR, [no. and date of issue not given]. (RZhRadiot, 1/78, 1Ye91)
9. Kaminskiy, A.A., S.E. Sarkisov, J.Bohm, R. Reiche, D. Schultze, and R. Vecker (0). Crystallographic and spectroscopic properties and stimulated emission in $\text{K}_{5-x}\text{Nd}_x\text{Bi}_{1-x}(\text{MoO}_4)_4$ laser crystals. IN: Sb 1, 239-240. (RZhRadiot, 12/77, 12Ye105)
10. Naboykin, Yu.V., L.A. Ogurtsova, and A.P. Podgornyy (0). Doped molecular crystals as active elements for lasers. IN: Sb 2, 140-141. (RZhRadiot, 2/78, 2Ye323)

4. Semiconductor: Simple Junction

- a. GaAs
11. Kargopol'tsev, V.S., Ye.P. Malygin, V.K. Malyshev, V.I. Molochev, K.N. Narzullayev, V.V. Nikitin, A.S. Semenov, and O.N. Talenskiy (1). Emission characteristics of a single-channel GaAs injection laser. KE, no.1, 1978, 211.
- b. CdS
12. Kritskiy, A.V., N.N. Krupa, and G.A. Kupchenko (5). Lasing in CdS single crystals under one-photon excitation. ZhETF, v.74, no.2, 1978, 483-489.

13. Vasina, N.I., N.G. Kopalín, I.V. Kryukova, and S.P. Prokof'yeva (0).

Surface processing of cadmium sulfide used in semiconductor lasers.

IN: Sb 3, 168-171. (RZhRadiot, 1/78, 1Ye134)

c. CdSe

14. Volovik, N.V., and M.I. Strashnikova (5). Stimulated radiation of an electron-hole plasma in a CdSe crystal and its temperature dependence.

FTT, no.1, 1978, 171-176.

d. InAs

15. Bendovskiy, Ye.B., L.G. Vlasova, I.V. Kryukova, V.I. Leskovich, and Ye.V. Matveyenko (0). Parameters of semiconductor radiation sources with e-beam

pumping in the 3-3.5 μ region. IN: Sb 3, 52-56. (RZhRadiot, 1/78, 1Ye110)

5. Semiconductor: Heterojunction

16. Alferov, Zh.I., V.M. Andreyev, B.V. Yegorov, S.G. Konnikov, and V.M.

Lantratov (4). Heterostructures in the AlAs-GaAs system obtained by se-

lective liquid epitaxy. ZhTF, no.2, 1978, 352-361.

17. Alferov, Zh.I., V.M. Andreyev, V.I. Korol'kov, Ye.L. Portnoy, and D.N.

Tret'yakov (4). Injection laser. Author's certificate USSR, no. 300126,

issued 6 May 1977. (RZhRadiot, 12/77, 12Ye119)

18. Girich, B.G., D.M. Gureyev, I.I. Zasavitskiy, T.I. Koropotkina, Ye.P.

Kulygina, B.N. Matsonashvili, M.I. Nikolayev, O.V. Pelevin, G.V. Flusov,

and A.P. Shotov (1). Laser heterostructures based on a solid solution of

$\text{Pb}_{1-x}\text{Sn}_x\text{Te}$. FTP, no.1, 1978, 124-128.

19. Kolbas, R.M., N.N. Golon'yak, R.D. Dyup'i, and P.D. Dankus (0). Coherent radiation at high energies in GaAs (1.776 eV; 77° K); filling the zones in the heterostructures $\text{Al Ga}_{1-x}\text{As-GaAs}$ obtained by gas epitaxy from metalloorganic compounds, with a quantum dimensional effect. ZhTF P, no.2, 1978, 69.

6. Semiconductor: Theory

20. Alferov, Zh.I., V.M. Andreyev, R.F. Kazarinov, Ye.L. Portnoy, and R.A. Suris (4). Semiconductor laser. Author's certificate USSR, no. 392875, issued 27 April 1977. (RZhRadiot, 2/78, 2Ye160)
21. Butsev, V.A., V.S. Ivanov, V.V. Kon'kov, I.V. Kryukova, and V.M. Tarasov (0). Study of injection sources of radiation in the near IR based on solid solutions of $\text{A}^{\text{III}}\text{B}^{\text{V}}$ semiconductor compounds. IN: Sb 3, 39-41. (RZhRadiot, 1/78, 1Ye109)
22. Gendel', V.S., O.I. Govorkov, V.A. Yevdokimov, N.G. Kopalin, I.V. Kryukova, and Yu.V. Petrushenko (0). Compact optical radiation source based on an e-beam-pumped semiconductor laser. IN: Sb 3, 49-51. (RZhMetrolog, 1/78, 1.32.996)
23. Loshchenkova, Ye.F., A.G. Molchanov, and Yu.M. Popov (1). The effect of spatial recombination on semiconductor laser action threshold. KE, no.1, 1978, 148.

7. Nd: Glass

24. Bubnov, M.M., A.V. Grudin, Ye.M. Dianov, and A.M. Prokhorov (1). Resonator deformations in a neodymium glass laser caused by a change in polarizability of excited neodymium ions. KE, no.2, 1978, 464-468.

25. Nilov, Ye.V., and V.A. Rusov (0). Stabilization of the energy characteristics of neodymium laser radiation during generation of a series of giant pulses. ZhTF P, no.3, 1978, 138.
26. Przhevuskiy, A.K., V.A. Savost'yanov, and M.N. Tolstoy (0). Chronoscopic study of the luminescence of neodymium glasses. KE, no.1, 1978, 104-113.
27. Sukhareva, L.K. (7). Simple and reliable axial mode selector for a laser with active Q-switching. OMP, no.1, 1978, 65-66.
28. Surkova, V.F. (0). Relative method of measuring the quantum yield of the luminescence of neodymium activated glass. ZhPS, v.28, no.1, 1978, 148-150.
29. Tursunov, A.T. (278). Broadening of the lasing spectrum during motion of the active element in the resonator. IN: Tr 2, 42-47. (RZhF, 1/78, 1D1207)
30. Verbovskiy, V.N., V.K. Makukha, A.S. Provorov, V.A. Smirnov, V.M. Tarasov, B.I. Troshin, and V.P. Chebotayev (0). High-power laser source for excitation of VUV and x-ray radiation. IN: Sb 4, 46. (RZhRadiot, 2/78, 2Ye148)
31. Zubarev, I.G., and S.I. Mikhaylov (1). Stimulated emission characteristics from an active Q-switched neodymium-glass laser controlled by an external signal. KE, no.1, 1978, 184.

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

32. Alekseyev, V.A., T.V. Bystrova, A.P. Svistunov, and A.I. Sopin (0).
Dependence of the pulse length on the parameters of the flashlamp power supply contour in an organic compound laser. IN: Sb 2, 253-255.
(RZhRadiot, 2/78, 2Ye67)
33. Aristov, A.V., D.A. Kozlovskiy, D.I. Stasel'ko, and V.L. Strigun (0).
Study of the spatial coherence of radiation in a rhodamine 6G laser with flashlamp pumping in an unstable resonator. IN: Sb 2, 223-224. (RZh Radiot, 2/78, 2Ye130)
34. Asimov, M.M., V.N. Gavrilenko, and L. Kozma (0). Effect of quenchers on the probability of intercombination transitions of rhodamine 6G molecules. IN: Sb 2, 183-185. (RZhRadiot, 2/78, 2Ye98)
35. Atroshchenko, V.I., V.N. Makarov, V.P. Novikov, and M.A. Novikov (0).
Electrooptic tuning of the spectrum of an organic compound laser. IN: Sb 2, 300-301. (RZhRadiot, 2/78, 2Ye118)
36. Baranova, L.I., V.N. Luk'yanov, N.V. Shelkov, and S.D. Yakubovich (0).
Sets of integrated-optic single-frequency dye emitters. IN: Sb 2, 18-19.
(RZhRadiot, 2/78, 2Ye116)
37. Bebchuk, A.S., V.S. Dudkin, and E.M. Syskova (0). Stability of the lasing characteristics of standard solutions of rhodamine 6G under flashlamp pumping. IN: Sb 2, 94-96. (RZhRadiot, 1/78, 1Ye84)

38. Blagoveshchenskiy, V.V., V.V. Ryl'kov, G.Yu. Senyushkin, and K.V. Timofeyev (0). Study of the effect of energy transfer on the lasing characteristics of dye mixtures. IN: Sb 2, 92-93. (RZhRadiot, 2/78, 2Ye58)
39. Buzinov, N.M., N.S. Dudina, L.K. Mikhaylov, S.B. Patrik, Ye.M. Spitsyn, and O.B. Cherednichenko (0). Lasers with continuous tuning in the UV. IN: Sb 2, 153-154. (RZhRadiot, 2/78, 2Ye113)
40. Derkacheva, L.D., and V.A. Petukhov (0). Study of the radiation kinetics of organic dyes in the picosecond range. IN: Sb 2, 179. (RZhRadiot, 2/78, 2Ye94)
41. Ginevich, G.R., and S.S. Anufrik (0). Photodestruction mechanism of active laser media based on ethanol solutions of rhodamine and oxazine dyes. IN: Sb 2, 65-67. (RZhRadiot, 2/78, 2Ye119)
42. Gurdzhiyan, L.M., O.L. Kaliya, N.S. Lebedeva, O.L. Lebedev, and T.N. Fesenko (0). Photolysis mechanism for alcohol solutions of rhodamine 6G. IN: Sb 2, 68-69. (RZhRadiot, 1/78, 1Ye86)
43. Ivankin, Ye.V., A.M. Lazaruk, I.P. Petrovich, and A.S. Rubanov (0). Study of the spectral characteristics of induced perturbations in the dielectric transmissivity of complex organic compound solutions. IN: Sb 2, 20-22. (RZhRadiot, 1/78, 1Ye280)
44. Konefal, Z., E. Lisicki, and T. Marszalek (NS). Influence of energy migration in micellar dye solutions on the performance of dye lasers. Acta physica polonica, v.A52, no.1, 1977, 149-155. (RZhF, 1/78, 1D1091)

45. Korda, I.M., M.N. Nenchev (0). Study of a flashlamp-pumped waveguide dye laser and possibilities of using it in intraresonator spectroscopy.
IN: Sb 2, 228-229. (RZhRadiot, 2/78, 2Ye60)
46. Korobov, A.M., and M.I. Dzyubenko (0). Frequency control in a rhodamine laser with flashlamp pumping in a nondisperse resonator. IN: Sb 2, 239-240. (RZhRadiot, 1/78, 1Ye69)
47. Korobov, A.M., and V.V. Pozhar (0). Kinetics of lasing spectra of dye lasers pumped by long pulses. IN: Sb 2, 266-268. (RZhRadiot, 2/78, 2Ye61)
48. Korobov, V.Ye., and A.K. Chibisov (0). Photochemical properties of rhodamine dyes. IN: Sb 2, 186-188. (RZhRadiot, 2/78, 2Ye115)
49. Kozlov, N.P., and Yu.S. Protasov (0). Lasing properties of organic dye solutions excited by cumulative plasmadynamic discharge radiation. IN: Sb 2, 233-234. (RZhRadiot, 2/78, 2Ye83)
50. Lebedev, S.A., B.Ya. Kogan, and V.A. Kizel' (0). Effect of various factors on the magnitude of the optical reflection index during internal reflection from an amplifying medium. IN: Sb 2, 119-121. (RZhRadiot, 2/78, 2Ye124)
51. Loyko, M.M., V.S. Motkin, A.F. Lobazov, and A.M. Rusetskiy (0). Flashlamp-pumped dye laser with a pulse repetition rate of 1 Hz. IN: Sb 2, 244-245. (RZhRadiot, 2/78, 2Ye131)

52. Masarnovskiy, L.V., S.A. Pupyshev, and A.N. Soldatov (0). Laboratory model of a rhodamine 6G laser pumped by a copper vapor laser. IN: Sb 2, 171-173. (RZhRadiot, 2/78, 2Ye77)
53. Nestrizhenko, Yu.A., and V.V. Pozhar (0). Dye laser with controlled spectral interval between orthogonally polarized lasing lines. IN: Sb 2, 306-307. (RZhRadiot, 1/78, 1Ye58)
54. Ryl'kov, V.V. (0). Elementary mechanisms of photochemical reactions in rhodamine dyes. IN: Sb 2, 70-72. (RZhRadiot, 2/78, 2Ye125)
55. Sinitzyn, G.V. (0). Instantaneous contour of the radiation spectrum of a sweep dye laser. IN: Sb 2, 282-284. (RZhRadiot, 2/78, 2Ye105)
56. Smirnov, V.S., and V.I. Studenov (0). Effect of an induced distortion in the resonator on the radiation characteristics of a flashlamp-pumped rhodamine 6G laser. IN: Sb 2, 248-250. (RZhRadiot, 1/78, 1Ye59)
57. Vinogradova, A.A., D.P. Krindach, B.I. Nazarov, and V.M. Salimov (0). Operating characteristics of a dye laser pumped by an ion laser with passive mode-locking. IN: Sb 2, 47-48. (RZhRadiot, 2/78, 2Ye103)
58. Volynkin, V.M., A.S. Yeremenko, M.G. Luchina, and A.I. Stepanov (0). Lasing characteristics of rhodamine dyes in fluorinated solvents. IN: Sb 2, 106. (RZhRadiot, 2/78, 2Ye90)
59. Zhuravlev, A.G., and G.R. Ginevich (0). Study of the phototransfer of an electron from rhodamine G, by a method of chemical polarization of the nuclei. IN: Sb 2, 213-215. (RZhRadiot, 2/78, 2Ye74)

b. Polymethine

60. Bonch-Bruyevich, A.M., Ye.N. Kaliteyevskaya, and T.K. Razumova (0). Reversible photoisomerization of polymethine dyes under high-power excitation. Superluminescence and stimulated emission in unstable photoisomers. IN: Sb 2, 194-195. (RZhRadiot, 2/78, 2Ye126)
61. Darmanyany, A.P., and L.M. Panova (0). Degradation of energy from an excited singlet state of sterically-hindered polymethine dyes. IN: Sb 2, 199-201. (RZhRadiot, 2/78, 2Ye134)
62. Melishchuk, M.V., O.V. Przhonskaya, and I.P. Il'chishin(0). Role of photoisomeric conversions of polymethine dyes in lasing processes. IN: Sb 2, 205-207. (RZhRadiot, 2/78, 2Ye75)
63. Przhonskaya, O.V., M.T. Shpak, G.G. Dyadyusha, and Yu.L. Slominskiy (0). Physicochemical aspects of the optimization of the molecular structure of polymethine dyes for lasing and modulation. IN: Sb 2, 73-75. (RZh Radiot, 2/78, 2Ye80)

c. Phthalimide

64. Das'ko, A.D., L.G. Pikulik, and V.A. Yakovenko (0). Lasing in organic compound solutions under pulsed laser excitation. IN: Sb 2, 147-148. (RZhRadiot, 2/78, 2Ye62)
65. Maslyukov, Yu.S. (0). Lasing characteristics in solutions of 4-amino-N-methyl-phthalimide in binary solvents. IN: Sb 2, 192-193. (RZhRadiot, 2/78, 2Ye79)

66. Tolstorozhev, G.B., S.A. Tikhomirov, and A.I. Maksimov (0). Lasing in phthalimide derivatives under picosecond pumping. IN: Sb 2, 29-31. (RZhRadiot, 1/78, 1Ye71).
- d. Coumarin
67. Galov, A.P., and N.A. Kuznetsova (0). Study of the photostability of the lasing characteristics of ethanol solutions of 7-diethylamino-4-methylcoumarin. IN: Sb 2, 100-102. (RZhRadiot, 2/78, 2Ye59)
68. Maslov, V.V., I.G. Naumenko, and V.P. Pelipenko (0). Lasing in a series of coumarin derivatives under laser and flashlamp pumping. IN: Sb 2, 57-59. (RZhRadiot, 1/78, 1Ye70)
69. Nemkovich, N.A. (0). Using the electrochemical reaction products in the active medium of a dye laser to broaden the tuning range of the lasing spectrum. IN: Sb 2, 273-275. (RZhRadiot, 2/78, 2Ye78)
- e. Cyanine
70. Blagoveshchenskiy, V.V., V.V. Danilov, L.K. Denisov, A.S. Yeremenko, S.M. Lan'kova, Yu.T. Mazurenko, V.N. Makarov, and G.Yu. Sanyushkin (0). Obtaining high-efficiency lasing in the 580-700 nm range under excitation by the second harmonic of an Nd laser and under flashlamp pumping. IN: Sb 2, 54-56. (RZhRadiot, 2/78, 2Ye136)
71. Danilov, V.V., G.G. Dyadyusha, A.A. Rykov, and Yu.L. Slominskiy (0). Photochemical and spectral-luminescent properties of ketotricarbocyanine solutions. IN: Sb 2, 82-84. (RZhRadiot, 2/78, 2Ye111)

72. Shvedova, L.A., and A.S. Tatikolov (0). Degradation of electron excitation energy in tricarbo-cyanine dyes. IN: Sb 2, 208-210. (RZhRadiot, 2/78, 2Ye120)
73. Tyurin, V.S., M.A. Al'perovich, Ye.I. Mirokhina, and V.I. Golovin (0). Photobleaching mechanism for cyanine dye solutions used as active laser media. IN: Sb 2, 76-78. (RZhRadiot, 1/78, 1Ye85)
- f. Xanthene
74. Rubinov, A.N., B.A. Bushuk, A.P. Stupak, and D. Shubert (0). Picosecond spectroscopy of xanthene dye solutions. IN: Sb 2, 174-178. (RZhRadiot, 1/78, 1Ye321)
- g. Miscellaneous Dyes
75. Abakumov, G.A., M.M. Mestechkin, V.B. Kolovskiy, L.S. Poltavets, L.S. Podol'skaya, A.P. Simonov, and V.V. Fadeyev (0). Shortwave lasing cutoff in organic compound solutions. IN: Sb 2, 97-99. (RZhRadiot, 1/78, 1Ye36)
76. Afanas'yev, A.A., and V.A. Batyrev (0). Laser with distributed feedback in a "traveling" population inversion lattice. IN: Sb 2, 42-44. (RZh Radiot, 1/78, 1Ye94)
77. Alekseyev, V.A., V.I. Kovintsev, N.A. Koslov, Yu.N. Mikhaylov, B.A. Konstantinov, and G.P. Savin (0). Four-color flashlamp-pumped organic compound laser. IN: Sb 2, 256. (RZhRadiot, 2/78, 2Ye96)

78. Alekseyeva, V.I., A.S. Bebchuk, A.P. Galov, Yu.N. Gerulaytis, Ye.D. Donner, V.S. Dudkin, E.V. Ivanova, V.N. Kokin, Ye.A. Luk'yanets, L.Ye. Marinina, and T.A. Suvorova (0). Developing an experimental industrial assortment of lasing compounds for lasers tunable in the 400-750 nm range. IN: Sb 2, 49-51. (RZhRadiot, 2/78, 2Ye71)
79. Alekseyeva, V.I., V.M. Volkov, V.N. Kokin, Ye.A. Luk'yanets, L.Ye. Marinina, A.V. Reznichenko, and G.N. Sosunov (0). Study of the characteristics of new lasing compounds. IN: Sb 2, 52-53. (RZhRadiot, 2/78, 2Ye86)
80. Antonov, Ye.N., and Ye.B. Berik (0). Using diffraction lattices as a frequency selector in c-w dye lasers. IN: Sb 2, 308-309. (RZhRadiot, 2/78, 2Ye66)
81. Apanasevich, P.A., A.A. Afanas'yev, A.L. Kiselevskiy, and T.Sh. Efendiyev (0). Dye laser with higher order distributed feedback due to a phase thermal lattice. IN: Sb 2, 12-14. (RZhRadiot, 2/78, 2Ye64)
82. Aristov, A.V. (0). Efficiency limit of tunable dye lasers under laser flash-lamp pumping. IN: Sb 2, 130-131. (RZhRadiot, 2/78, 2Ye85)
83. Atroshchenko, V.I., and V.N. Makarov (0). Study of a sweep regime for organic compound laser radiation. IN: Sb 2, 304-305. (RZhRadiot, 2/78, 2Ye128)
84. Batishche, S.A., and V.A. Mostovnikov (0). Operation of dye lasers and amplifiers under high-intensity pumping. IN: Sb 2, 144-146. (RZhRadiot, 1/78, 1Ye66)

85. Belokon', M.V., and A.V. Adamushko (0). Spectral characteristics of lasing in a c-w dye laser with an absorption cell in the resonator. IN: Sb 2, 347-348. (RZhRadiot, 2/78, 2Ye129)
86. Bezrodnyy, V.I., N.M. Narovlyanskaya, and Ye.A. Tikhonov (5). Amplitude-spectral asymmetry of stimulated emission from dye solutions. KE, no.2, 1978, 290-296.
87. Buzinov, N.M., V.G. Dmitriyev, N.S. Dudina, V.I. Yeliseyenko, S.M. Kopylov, and O.B. Cherednichenko (0). Study and design of efficient sources of tunable radiation in the 330-420 nm range. IN: Sb 2, 302-303. (RZhRadiot, 1/78, 1Ye142)
88. Denisov, L.K., N.V. Korol'kova, I.V. Krasnov, A.M. Lantsov, L.M. Rubenko, and B.M. Uzhinov (0). Evaluating the efficiency of active media of liquid lasers according to their spectral luminescent characteristics. IN: Sb 2, 85-86. (RZhRadiot, 2/78, 2Ye76)
89. Denisov, L.K., N.A. Kozlov, I.V. Krasnov, L.M. Rubenko, and B.M. Uzhinov (0). Lasing mechanism in sodium 8-hydroxypyrene-1, 3, 6-trisulfonate under flashlamp pumping. IN: Sb 2, 211-212. (RZhRadiot, 2/78, 2Ye117)
90. Denisov, L.K., N.A. Kozlov, A.G. Kostin, I.V. Krasnov, A.M. Lantsov, and K.A. Nikolayev (0). Pulsed tunable dye laser with a triaxial pumping system. IN: Sb 2, 231-232. (RZhRadiot, 2/78, 2Ye104)
91. Dzyubenko, M.I., I.G. Naumenko, and V.P. Pelipenko (0). Spatial characteristics of radiation in an organic compound laser with coaxial flashlamp pumping. IN: Sb 2, 237-238. (RZhRadiot, 2/78, 2Ye135)

92. Goryayeva, Ye.M., A.V. Shablya, and A.P. Serov (0). Luminescence and stimulated emission from solutions of neodymium nitrate complexes with perdeutero-tributyl phosphate. ZhPS, v.28, no.1, 1978, 75-80.
93. Gruzinskiy, V.V., S.V. Davydov, M.N. Kaputerko, V.V. Rozhkov, L.K. Stratskevich, and P.M. Shishlo (0). Losses in complex organic compound vapors under optical and e-beam pumping. IN: Sb 2, 110-112. (RZhRadiot, 2/78, 2Ye308)
94. Il'chishin, I.P., and M.T. Shpak (0). Lasing in dye solutions in oriented and isotopic liquid crystal matrices. IN: Sb 2, 122-124. (RZhRadiot, 2/78, 2Ye112)
95. Kabanov, V.V., and A.S. Rubanov (0). Anomalous dispersion in the region of the absorption and amplification bands of organic dyes. IN: Sb 2, 132-134. (RZhRadiot, 2/78, 2Ye137)
96. Karamaliyev, R.A., and N.M. Godzhayev (86). Theory of lasing in polar organic dye solutions. IN: Tr 3, 72-75. (RZhF, 1/78, 1D1087)
97. Keskinova, E.N., A.Ts. Andreev, P.P. Kircheva, and M.A. Misheva (NS). Possible effect of photoisomerization on the stimulated fluorescence of organic dyes. Bulgarian Journal of Physics, v. 3, no. 4, 1976 (1977), 421-426. (RZhF, 1/78, 1D1092)
98. Kukhtarev, N.V. (0). Cholesteric liquid crystal laser with distributed feedback. IN: Sb 2, 37-38. (RZhRadiot, 2/78, 2Ye121)

99. Lagutin, M.F., N.P. Mustetsov, and A.A. Zarudnyy (0). Single-stage amplifier for an organic dye laser. IN: Sb 2, 341-342. (RZhRadiot, 1/78, 1Ye67)
100. Levin, M.B., and A.S. Cherkasov (0). Determining the constants of inter-combination conversion and quenching of triplet molecules in a lasing regime. IN: Sb 2, 202-204. (RZhRadiot, 2/78, 2Ye122)
101. Lisitsyn, V.N., A.M. Razhev, and A.S. Chernenko (10). UV dye laser with excimer laser pumping. KE, no.2, 1978, 424-425.
102. Lisitsyn, V.N., A.M. Razhev, and A.S. Chernenko (0). UV dye lasers pumped by pulsed excimer lasers. IN: Sb 2, 149-150. (RZhRadiot, 1/78, 1Ye61)
103. Lyakhov, G.A., and N.V. Suyazov (0). Calculating the output parameters of a distributed feedback laser (the "focused" four-level model). IN: Sb 2, 39-41. (RZhRadiot, 2/78, 2Ye65)
104. Malashkevich, G.Ye., and V.V. Kuznetsova (0). Using complex compounds of rare-earth elements as activators for laser media. IN: Sb 2, 87-88. (RZhRadiot, 2/78, 2Ye139)
105. Narovlyanskaya, M.N., and Ye.A. Tikhonov (5). The effect of superfluorescence on the operation of lasers with dye amplifiers. KE, no.2, 1978, 297-304.
106. Nemkovich, N.A. (0). Nanosecond photoelectron system for recording instantaneous spectra and damping time of luminescence in dyes, by means of a pulsed dye laser. IN: Sb 2, 336-338. (RZhRadiot, 2/78, 2Ye82)

107. Nestrizhenko, Yu.A., L.M. Podgornaya, S.V. Tsukerman, V.K. Polyakov, L.P. Snagoshchenko, N.I. Mal'tseva, and V.I. Grigor'yeva (0). Study on the effect of molecular structure on the polarization characteristics of stimulated emission. IN: Sb 2, 135-136. (RZhRadiot, 2/78, 2Ye423)
108. Pikulik, L.G., A.I. Maksimov, and A.S. Koval'chuk (0). Effect of temperature on the spectral dependence of anisotropy of stimulated emission in solutions of complex molecules. IN: Sb 2, 127-129. (RZhRadiot, 2/78, 2Ye109)
109. Rubinov, A.N., and T.Sh. Efendiyev(0). Dye lasers with pumping-triggered distributive feedback. IN: Sb 2, [pages not given]. (RZhRadiot, 2/78, 2Ye106)
110. Rudik, K.I., A.I. Maksimov, L.P. Senkevich, and M.Ya. Kostko (0). Investigation of optical quenching of the stimulated emission from complex molecule solutions. ZhPS, v.28, no.1, 1978, 91-94.
111. Rudik, K.I., and L.P. Senkevich (0). Study of optical quenching in a dye laser. IN: Sb 2, 137-139. (RZhRadiot, 1/78, 1Ye62)
112. Rudik, K.I., and O.I. Yaroshenko (0). Rotating the plane of polarization in laser amplifiers using solutions of complex organic compounds with laser pumping. IN: Sb 2, 164-166. (RZhRadiot, 2/78, 2Ye84)
113. Smirnov, V.S., and N.G. Bakhshiyev (0). Effect of the temperature of the solution on the energy characteristics of flashlamp-pumped dye lasers. IN: Sb 2, 226-227. (RZhRadiot, 2/78, 2Ye63)

114. Smirnova, T.N., N.M. Narovlyanskaya, and Ye.A. Tikhonov (0). Effects of the nonlinear interaction of pumping, lasing and superfluorescence beams in dye lasers and amplifiers. IN: Sb 2, 160-162. (RZhRadiot, 2/78, 2Ye95)
115. Strizhnev, V.S., and L.I. Bushuk (0). Energy gain as a function of duration and intensity of pumping. IN: Sb 2, 241-243. (RZhRadiot, 1/78, 1Ye64)
116. Studenov, V.I., G.N. Dorofeyenko, M.I. Knyazhanskiy, and Ye.P. Olekhovich (0). Piriliyev salts: a new class of activators for liquid lasers. IN: Sb 2, 103-105. (RZhRadiot, 2/78, 2Ye325)
117. Tikhonov, Ye.A., Ye.I. Zabello, and V.I. Vashuk (0). Spectral characteristics of dye lasers with dynamic distributed feedback. IN: Sb 2, 9-11. (RZhRadiot, 2/78, 2Ye107)
118. Tomin, V.I. (0). Electrochemical reactions and prospects for using them in dye lasers. IN: Sb 2, 60-62. (RZhRadiot, 2/78, 2Ye110)
119. Vasilenko, L.S., V.P. Chebotayev, and A.V. Shishayev (0). Stabilizing the frequency of a c-w dye laser by two-photon absorption resonances in a standing wave field at the 3-4 transition of sodium. IN: Sb 2, 292-294. (RZhRadiot, 2/78, 2Ye70)
120. Vasilenko, L.S., A.V. Shishayev, and V.Ya. Yurshin (0). A narrow-band c-w dye laser stabilized according to the standard K 86 line. IN: Sb 2, 295-297. (RZhRadiot, 2/78, 2Ye68)

121. Vernigor, Ye.M., L.S. Loyko, Yu.F. Morgun, M.A. Muravitskiy, S.A. Ryzhechkin, and V.N. Shalayev (0). Chemical structure and optical and laser properties of various analogs of distyrene benzene. IN: Sb 2, 63-64. (RZhRadiot, 2/78, 2Ye133)
122. Volosov, V.D., and A.G. Kalintsev (0). Tunable laser in the UV, visible and IR. IN: Sb 2, 155-156. (RZhRadiot, 1/78, 1Ye140)
123. Zabello, Ye.I., V.I. Vashuk, V.I. Bezrodnyy, A.G. Chmul', and A.V. Gavril'tsov (0). New schemes for dye lasers with dynamic distributed feedback. IN: Sb 2, 6-8. (RZhRadiot, 2/78, 2Ye114)
124. Zabiyaikin, Yu.Ye. (0). Spatial structure of radiation in a laser using solutions of organic compounds. IN: Sb 2, 246-247. (RZhRadiot, 2/78, 2Ye72)
125. Zabiyaikin, Yu.Ye. (0). Reducing the thermo-optic distortions of active elements of organic compound lasers by a method of compensation. IN: Sb 2, 269-270. (RZhRadiot, 2/78, 2Ye93)
126. Zubarev, I.G., A.V. Kotov, O.A. Logunov, and Yu.Yu. Stoylov (1). Stepped photoionization of dye vapors. KE, no.1, 1978, 51-55.
127. Zuyev, V.S., O.A. Logunov, and Yu.Yu. Stoylov (0). Photoionization of excited dye molecules in a gas phase. IN: Sb 2, 113-115. (RZhRadiot, 2/78, 2Ye132)

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

128. Akchurin, G.G., and V.V. Tuchin (0). Study of the modulation characteristics of a He-Ne laser operating at different wavelengths. Metrologiya, no. 2, 1978, 41-43.
129. Dolbilov, A.S., Yu.G. Zakharenko, P.A. Pavlov, and V.Z. Shapoval (0). Experimental study of the vibrationless region in sectioned discharge tubes. Metrologiya, no.2, 1978, 44-46.
130. Fofanov, Ya.A. (0). Study of a He-Ne laser stabilized by saturated absorption in iodine. Metrologiya, no.2, 1978, 49-52.
131. Gibadullin, N.S., F.Kh. Mukhtasarov, and V.K. Nurmukhametov (38). Calculating the resonator parameters of a multipass laser amplifier with an anisotropic element. Deposit at VINITI, no.3584-77, 5 September, 1977, 12 p. (RZhF, 1/78, 1D1054)
132. Gus'kov, L.N., V.P. Sologub, and B.I. Troshin (10). Study of the effect of instability in a gas discharge plasma on the characteristics of 0.63 μ He-Ne laser radiation. Part I. Institut fiziki poluprovodnikov SOAN. Preprint, 1976, 44 p. (RZhF, 1/78, 1D1102)
133. Im Tkhek-de, O.P. Podavalova, and V.P. Ran'shikov (0). Collision-induced four-photon parametric mixing at the $2S_{1/2} - 2P_{1/2}$ transition in neon in an He-Ne laser field at 1.5 μ . IN: Sb 4, 21-23. (RZhRadiot, 2/78, 2Ye38)

134. Kal'shteyn, M.L., D.P. Krindach, V.P. Popov, and V.M. Salimov (0). Possibility of developing a high-power He-Ne laser to pump organic compound lasers. IN: Sb 2, 167-168. (RZhRadiot, 1/78, 1Ye45)
135. Klement'yev, V.M., Yu.A. Matyugin, and V.P. Chebotayev (0). Nonlinear resonance frequency mixing in He-Ne lasers. IN: Sb 4, 14-16. (RZhRadiot, 2/78, 2Ye44)
136. Mel'nikov, N.A. (0). He-Ne laser stabilized by saturated absorption in iodine. Metrologiya, no.2, 1978, 52-55.
137. Sologub, V.P., and V.I. Troshin (0). Study of radiation intensity and frequency fluctuations of a He-Ne laser at 0.63 μ . Metrologiya, no.2, 1978, 38-41.
138. Vlasov, A.N., and V.V. Teselkin (0). Fluctuations of the generation frequency of a He-Ne laser stabilized at the methane absorption line. Metrologiya, no.2, 1978, 55-57.
139. Zabortseva, T.A., A.I. Ryabov, and V.A. Stepanov (0). Study of the electrical parameters of the active element of a He-Ne laser. OIS, v.44, no.2 1978, 332-335.

2. Molecular Beam and Ion

- a. CO_2
140. Afonin, Yu.V., G.G. Dolgov-Savel'yev, L.L. Kozorovitskiy, A.M. Orishich, V.K. Orlov, and A.G. Ponomarenko (193). Effect of a magnetic field on an e-beam-excited volumetric discharge. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Preprint, 1977, 8 p. (RZhF, 1/78, 1G370)

141. Apollonov, V.V., A.I. Barchukov, S.I. Derzhavin, I.G. Kononov, A.M. Prokhorov, K.N. Firsov, Yu.A. Shakir, and V.A. Yamshchikov (0). Possibility of increasing the gain of a CO₂ amplifier. ZhTF P, no.20, 1977, 1073-1076. (RZhRadiot, 2/78, 2Ye18)
142. Batyrbekov, G.A., M.P. Mardenov, S.K. Kunakov, A.A. Klyukin, O.V. Komarov, N.N. Petrov, Zh.S. Takibayev, and K.S. Karitonova (442). Study of the plasma parameters of a CO₂+N₂+He³ gas mixture formed in the active zone of a stationary nuclear reactor. ZhTF, no.1, 1978, 39-41.
143. Batyrbekov, G.A., V.A. Danilychev, and I.B. Kovsh (444). Study on the creation of an electrically isolated CO₂ laser operating in a stationary nuclear reactor. AN KazSSR. Institut yadernoy fiziki. Preprint, no.18, Alma-Ata, IYaF, 1977, 40 p. (KL, 5/78, 4243)
144. Belomestnov, P.I., A.I. Ivanchenko, V.N. Kroshkov, R.I. Soloukhin, N.A. Fomin, and Yu.A. Takobi (0). High-power c-w and pulsed gas-discharge lasers. Part 1. High-power c-w CO₂ lasers. IN: Sb 5, 271-273. (RZhF, 1/78, 1D1143)
145. Bolotskikh, L.T., and A.K. Popov (0). Optimal conditions for generating the sum frequencies of a CO₂ laser, using vibrational nonlinearities of molecular gases. IN: Sb 4, 113-114. (RZhRadiot, 2/78, 2Ye19)
146. Doronin, V.G., and V.I. Novikov (0). Analysis of the characteristics of a laser using a mixture of CO₂ isotopes. ZhPS, v.28, no.1, 1978, 50-56.
147. Korolev, V.F. (2). Molecular laser for investigations in a broad infrared spectrum range. VMU, no.1, 1978, 107-109.

148. Kozlov, G.I., V.A. Kuznetsov, and V.A. Masyukov (0). Powerful multibeam gas-discharge c-w CO₂ laser. ZhTF P, no.3, 1978, 129.
149. Mikaberidze, A.A. (1). Optical pyrometry of a gas-discharge molecular laser plasma. IN: Tr 4, 58-101.
150. Osipov, V.V., P.A. Slobodyanyuk, and V.A. Tel'nov (78). Compact CO₂ laser. PTE, no.1, 1978, 198-200.
151. Peschel, C. (NS). Design and practical possibilities for high-power CO₂ lasers. IN: Sb 1, 291-294. (RZhRadiot, 12/77, 12Ye32)
152. Poehler, M., F. Echtermeyer, and D. Heise (NS). Optical transmitter or amplifier with an active medium consisting of a mixture of CO₂, N₂, He and H₂, and a method for maintaining a high output power in the optical transmitter or amplifier. Patent GDR, no.120731, issued 20 June 1976. (RZhRadiot, 12/77, 12Ye68)
- b. CO
153. Trubacheyev, E.A. (1). Study of the physicochemical properties of a CO laser plasma. IN: Tr 4, 3-57.
- c. Noble Gas
154. Alferov, G.N., V.A. Grigor'yev, and V.I. Donin (10). Selection of radiation in high-powered argon lasers. KE, no.1, 1978, 29-35.
155. Belousova, I.M., Yu.I. Dymshits, V.G. Neverov, and V.G. Khoroshev (0). Formation of multiply charged ions in the active medium of an e-beam-pumped xenon laser. ZhTF P, no.20, 1977, 1087-1090. (RZhRadiot, 1/78, 1Ye29)

156. Donin, V.I. (0). High-power sources of visible c-w coherent radiation based on ion lasers. IN: Sb 4, 42. (RZhRadiot, 2/78, 2Ye28)
157. Karasev, V.A., D.P. Krindach, M.I. Landman, B.I. Nazarov, and V.M. Salimov (0). Mode-locked argon laser for pumping organic compound lasers. IN: Sb 2, 169-170. (RZhRadiot, 2/78, 2Ye24)
158. Rubin, P.L. (1). Some problems of the kinetics of an argon ion laser. IN: Tr 4, 102-128.
159. Sakharov, I.Ye., L.D. Tsendin, and S.V. Shatalin (29). The effect of trace He and Ne on argon ion laser characteristics. ZhTF, no.2, 1978, 337-343.
- d. H_2
160. Shevera, V.S., A.K. Shuibov, I.P. Zapesochnyy, and A.Yu. Zayats (136). Study of the hydrogen superglow in a surface discharge. UFZh, no.2, 1978, 308-310.
161. Vasilenko, L.V., B.I. Troshin, V.P. Chebotayev, A.A. Chernenko, and A.S. Yatsenko (0). Generating VUV radiation in atomic hydrogen at 972 Å. IN: Sb 4, 24-25. (RZhRadiot, 2/78, 2Ye29)
- e. N_2
162. Aleksandrov, N.L., A.M. Knochakov, and E.Ye. Son (118). Electron distribution function and kinetic coefficients of a nitrogen plasma. 1. Unexcited molecules. Fizika plazmy, no.1, 1978, 169-176.

163. Bychkov, Yu.I., V.F. Losev, V.V. Savin, and V.F. Tarasenko (78). Increase in the radiation pulse duration in lasers using self-limited transitions. IVUZ Fiz, no.1, 1978, 81-86.
- f. CF₄
164. Alimpiyev, S.S., G.S. Baranov, N.V. Karlov, A.I. Karchevskiy, V.L. Martynkyan, Sh.Sh. Nabiyev, and E.M. Khokhlov (0). Adjustment and stabilization of emission from a laser based on the carbon tetrafluoride molecule with optical pumping. ZhTF, no.2, 1978, 167.
- g. Metal Vapor
165. Bogus, A.M., V.L. Dzhikiya, and A.A. Chernov (0). Device for investigating lasing in pure metal vapor in a transverse discharge. KE, no.2, 1978, 442-444.
166. Bokhan, P.A., and V.I. Solomonov (78). Study of a barium vapor laser. KE, no.2, 1978, 319-324.
167. Bokhan, P.A., and V.B. Shcheglov (78). Study of a pulsed copper vapor laser with transverse excitation. KE, no.2, 1978, 381-387.
168. Bokhan, P.A. (0). High-power pulsed metal vapor lasers. IN: Sb 4, 43-45. (RZhRadiot, 2/78, 2Ye33)
169. Il'yushko, V.G., V.G. Kravchenko, V.S. Mikhalevskiy, and V.A. Polunin (0). Generation of coherent emission in ionic metal-vapor lasers under excitation in a transverse discharge. ZhPS, v.28, no.1, 1978, 143-144.
170. Kneipp, H., and M. Rentsch (NS). Discharge-heated copper vapor laser. IN: Sb 1, 69-70. (RZhRadiot, 12/77, 12Ye66)

171. Platonov, A.V., A.N. Soldatov, and A.G. Filonov (396). Pulsed strontium-vapor laser. KE, no.1, 1978, 198.
172. Slabko, V.V., V.P. Timofeyev, A.K. Popov, and V.F. Lukinykh (0). Generation of coherent radiation at 896 Å in mercury vapor under conditions of two-photon resonance and phase matching. Other prospective schemes for resonance generation of VUV radiation. IN: Sb 4, 17-20. (RZhRadiot, 2/78, 2Ye31)
173. Timofeyev, V.P., V.G. Arkhipkin, L.V. Melkozerova, and A.K. Popov (0). Frequency mixing in alkali metal vapor lasers lasing in a wide range from the ultraviolet to the far infrared. IN: Sb 4, 27-28. (RZhRadiot, 2/78, 2Ye34)
174. Tuchin, V.V. (45). Characteristics of the effect of discharge current fluctuations on He-Cd⁺ laser output radiation. KE, no.1, 1978, 160.
175. Zemskov, K.I., M.A. Kazaryan, V.G. Mokerov, G.G. Petrash, and A.G. Petrova (1). Coherent properties of a copper vapor laser and dynamic holograms on vanadium dioxide films. KE, no.2, 1978, 425-428.
176. Zhukov, V.V., Ye.L. Latush, and M.F. Sem (343). Generation of coherent radiation at ion transitions of aluminum, barium and strontium. IN: Tr 5, 38-42. (RZhF, 1/78, 1D1112)
177. Znamenskiy, V.B. (0). Possibility of producing a pulsed laser using a mixture of mercury (546.1 nm) and nitrogen with optical pumping. ZhTF, no.2, 1978, 411-413.

h. Gasdynamic

178. Brunne, M., A. Zielinski, and J. Milewski (NS). Example of numerical analysis of the $N_2O/N_2/H_2O$ c-w gasdynamic laser. BAPS, no.5, 1977, 399-402. (RZhRadiot, 1/78, 1Ye19)
179. Markachev, Yu.Ye. (0). Influence of collisional relaxation on the structure of the fundamental mode in a Fabry-Perot cavity of a gasdynamic laser. TVT, no.1, 1978, 132-136.
180. Soloukhin, R.I. (0). State of the art and prospects for development of combustion gasdynamic lasers. IN: Sb 6, 30-49. (RZhMekh, 1/78, 1B259)

3. Excimer

181. Bychkov, Yu.I., N.V. Karlov, V.F. Losev, G.A. Mesyats, A.M. Prokhorov, and V.F. Tarasenko (0). XeCl laser with a discharge sustained by an electron beam. ZhTF P, no.2, 1978, 83.
182. Datskevich, I.S., L.D. Mikheyev, and I.V. Pogorel'skiy (1). Study of a photochemical laser using the XeO molecule. Fizicheskiy institut AN SSSR. Preprint, no.50, 1977, 31 p. (RZhF, 2/78, 2D1022)
183. Isakov, I.M., A.G. Leonov, and V.Ye. Ogluzdin (0). Study of an XeF electric discharge laser. ZhTF P, no.20, 1977, 1066-1069. (RZhRadiot, 2/78, 2Ye22)

4. Theory

184. Afonin, Yu.V., A.M. Orishich, A.G. Ponomarenko, R.I. Soloukhin, V.N. Tishchenko, Yu.I. Khapov, and S.P. Shalamov (0). High-power c-w and pulsed gas-discharge lasers. Part 2. Pulsed gas lasers. IN: Sb 5, 273-276. (RZhF, 1/78, 1D1131)

185. Askar'yan, G.A., and B.M. Manzon (1). Generation of powerful submicrosecond laser pulses and their application in laser gas dynamics: observation of a light-detonation wave along the ray and ray penetration into an absorbing gas medium, generation wave, ray motion or ray focus. ZhETF P, v.27, no.2, 1978, 113-117.
186. Baklanov, Ye.V., and B.Ya. Dubetskiy (10). Two-photon absorption resonance, taking transit effects into account. KE, no.1, 1978, 99-103.
187. Blokhin, A.P., and I.I. Kalosha (0). Polarization of radiation in a laser using complex molecules in a gas phase. IN: Sb 2, 107-109. (RZhRadiot, 1/78, 1Ye34)
188. Borisevich, N.A. (3). Relaxation processes in complex molecule vapors. IAN Fiz, no.2, 1978, 226-232.
189. Burnashev, M.N., and V.Ye. Privalov (0). The effect of space and time modulation of excitation on the output characteristics of gas lasers. Ois, v.44, no.2, 1978, 325-331.
190. Fedorov, A.I., V.F. Tarasenko, and Yu.I. Bychkov (0). Electric discharge laser using an Ar:Xe:Cl mixture. ZhTF P, no.3, 1978, 132.
191. Kalanov, T.Z., A.I. Osipov, and V.Ya. Panchenko (0). Displacement of the chemical equilibrium in a binary reacting mixture of molecular gases subjected to resonance laser radiation. ZhPMTF, no.1, 1978, 3-9.
192. Kuz'min, M.V. (1). Excitation of vibrations in molecules by varying the intensity of a laser pulse. KSpF, no.7, 1977, 21-25. (RZhF, 1/78, 1D1053)

193. Margolin, A.D., and V.M. Shmelev (0). Thermal instability of a vibrationally excited molecular gas. FGIV, no.1, 1978, 52-62.
194. Plis, A.I., and N.B. Rodinov (0). Role of a resonance diluent in gas lasers using electron transitions. ZhTF P, no.20, 1977, 1095-1099. (RZhRadiot, 2/78, 2Ye52)
195. Yevdokimov, O.B., G.A. Mesyats, and V.B. Ponomarev (78). Instability of an e-beam discharge on an accelerating pressure front. ZhTF, no.1, 1978, 184-186.

D. CHEMICAL LASERS

1. $F_2 + H_2$ (D₂)

196. Baranov, V.K., Yu.N. Demidenko, D.F. Zelenskiy, S.B. Kormer, I.N. Pegoyev, I.A. Troshkin, V.A. Tsukerman, Ye.N. Shchetinin, and B. Yushko (0). F_2-H_2 chemical laser with e-beam excitation. KE, no.2, 1978, 415-417.
197. Golovichev, V.I. (0). Numerical modeling of an energy conversion process in a turbulent diffusion-type HF chemical laser. IN: Sb 7, 116-121. (RZhF, 1/78, 1D1146)

2. $CS_2 + N_2O + O_2$

198. Dudkin, V.A., V.B. Librovich, and V.B. Rukhin (0). Operation of a c-w chemical CO laser during combustion of a $CS_2-N_2O-O_2$ mixture. FGIV, no.1, 1978, 141-143.

3. S₂

199. Bashkin, A.S., N.L. Kupriyanov, and A.N. Orayevskiy (0). Feasibility of a visible-region chemically pumped laser using an S₂ molecule. KE, no. 2, 1978, 421-424.

4. Photodissociative

200. Dymov, B.P., and G.A. Skorobogatov (12). Investigation of a photodissociative ion laser using bis(trifluoromethyl) phosphine iodide. ZhTF, no.1, 1978, 124-128.
201. Kiselev, M.V., B.D. Bobrov, A.S. Grenishin, and T.N. Kotlikova (0). Faraday rotation in the active medium of a photodissociation iodine laser (amplifier). KE, no.2, 1978, 312-318.

E. COMPONENTS

1. Resonators

a. Design and Performance

202. Ablekov, V.K., V.S. Belyayev, V.P. Vasil'yev, A.N. Golovistikov, V.M. Davydov, and V.G. Savel'yev (0). Periodic modes of an optical resonator. ZhPS, v.28, no.1, 1978, 57-59.
203. Alekseyev, V.A., A.D. Gondra, V.I. Kozintsev, N.A. Kozlov, and A.I. Sovin (0). Study of ways to reduce the divergence of laser radiation from flash-lamp-pumped organic compounds. IN: Sb 2, 216-218. (RZhRadiot, 2/78, 2Ye97)

204. Balashov, I.F., V.A. Berenberg, and V.A. Romanov (0). Study of transient processes and build-up time for oscillations in open resonators. OIS, v.44, no.2, 1978, 312-319.
205. Kozintsev, V.I., A.A. Churin, and I.I. Shatokhin (0). Dynamics of thermo-optic distortions in the resonator of an organic compound laser. IN: Sb 2, 219. (RZhRadiot, 2/78, 2Yel192)
206. Petru, F., and Z. Vesela (NS). Gas laser resonator. Author's certificate Czechoslovakia, no. 165273, issued 15 October 1976. (RZhRadiot, 2/78, 2Yel195)
207. Pokrovskiy, Yu.A., and A.Ya. Parinskiy (208). Optical resonator. Author's certificate USSR, no. 556527, issued 18 May 1977. (RZhRadiot, 2/78, 2Yel190)
208. Polze, S. (NS). Tunable laser resonator with longitudinal axial coupling of the pumping radiation. Patent GDR, no. 123035, issued 12 November 1976. (RZhRadiot, 1/78, 1Yel164)
209. Popela, B., V. Prajzner, and M. Rubes (NS). Optical resonator for a gas laser. Author's certificate Czechoslovakia, no. 166392, issued 15 December 1976. (RZhRadiot, 2/78, 2Yel196)
210. Prajzner, V. (NS). Device for mounting the mirror of an optical resonator in an optimal position. Author's certificate Czechoslovakia, no. 162386, issued 15 February. (RZhRadiot, 2/78, 2Yel193)

211. Rabinovich, E.M. (0). Spatial field characteristics and natural frequencies of an active cavity filled with a lens-like medium. Metrologiya, no.2, 1978, 46-49.

b. Mode Kinetics

212. Gnatovskiy, A.V., A.P. Loginov, M.V. Nikolayev, and M.T. Shpak (5). Universal method of converting laser fields with complex transverse-modal structure. UFZh, no.2, 1978, 311-317.

213. Il'in, A.V. (118). Mode composition of waveguide laser radiation. IN: Tr 6, 220-224. (RZhRadiot, 2/78, 2Ye268)

214. Nayda, O.N. (0). Thermoelastically disturbed resonator modes. KE, no.2, 1978, 428-431.

2. Pump Sources

215. Aleksandrov, V.V., V.N. Koterov, V.V. Pustovalov, A.M. Soroka, and A.F. Suchkov (1, 61). Space-time evolution of the cathode layer in electroionization lasers. KE, no.1, 1978, 114-121.

216. Alekseyev, V.A., Yu.G. Basov, S.A. Boldyrev, and A.I. Zhnikrup (0). Interrelationship between energy variations in the radiation of a coaxial flashlamp and in a dye laser. IN: Sb 2, 257-259. (RZhRadiot, 2/78, 2Ye69)

217. Andreyev, S.I., and Yu.V. Varlamov (0). Optical properties of a sodium plasma. OIS, v.44, no.1, 1978, 51-59.

218. Baranov, S.A., I.V. Kolpakova, M.Yu. Kononova, A.A. Mak, and O.A. Motovilov (0). The efficiency of laser pumping by xenon flashlamps with interference coatings. KE, no.1, 1978, 174.

219. Barikhin, B.A., V.V. Borovkov, and L.V. Sukhanov (0). Efficiency of pumping solid-state and liquid lasers by short pulses. IN: Sb 2, 251-252. (RZhRadiot, 1/78, 1Ye82)
220. Batovskiy, O.M. (67). Device for simultaneous ignition of multiple flashlamps. Author's certificate USSR, no. 555567, issued 27 June 1977. (RZhRadiot, 2/78, 2Ye321)
221. Doronin, V.G., and V.I. Novikov (0). Optical pumping of gas lasers by external narrow-spectrum radiation. Deposit at VINITI, no. 4274-77. (ZhPS, v.28, no.1, 1978, 166)
222. Galun, B.V. (7). Thyristor generator for injection laser pumping in the working temperature range. OMP, no.1, 1978, 44-47.
223. Golubeva, N.S., A.S. Chernikov, and B.L. Sozinov (0). High-efficiency coherent pumping system with increased average power for organic dye lasers. IN: Sb 2, 163. (RZhRadiot, 2/78, 2Ye313)
224. Gordon, Ye.B., V.G. Yegorov, and V.S. Pavlenko (67). Pumping metal vapor lasers with pulse trains. KE, no.2, 1978, 452-454.
225. Grassme, W., and U. Lorenz (NS). Device for homogeneous pumping of the active medium of a solid-state laser. Patent GDR, no. 122889, issued 5 November 1976. (RZhRadiot, 12/77, 12Ye232)
226. Grintsevich, E.M., S.I. Yeliseyev, and V.V. Serov (0). Power supply unit for a flashlamp-pumped "Blesk-1000" dye laser. IN: Sb 2, 264-265. (RZhRadiot, 2/78, 2Ye314)

227. Kamrukov, A.S., N.P. Kozlov, and Yu.S. Protasov (0). Effect of flow velocity on the spectral distribution of radiation energy in shock-compressed plasma of plasmadynamic optical pumping systems for organic dye lasers.
IN: Sb 2, 235-236. (RZhRadiot, 2/78, 2Ye315)
228. Lavrovskiy, L.A., Yu.F. Morgun, M.A. Muravitskiy, and S.A. Ryzhechkin (0). Excitation of dyes by gigawatt monopulse radiation. ZhPS, v.28, no.2, 1978, 250-254.
229. Levin, M.B., and A.S. Cherkasov (0). Efficiency of using liquid luminescence filters for disposition around flashlamps. IN: Sb 2, 260-261. (RZhRadiot, 2/78, 2Ye318)
230. Mal'tsev, A.G., and A.N. Yelagin (0). Laser system for resonance pumping in a c-w regime. IN: Sb 4, 48-50. (RZhRadiot, 2/78, 2Ye307)
231. Serov, V.V., and G.A. Skripko (0). Optimizing the pumping conditions for various classes of dyes in the "Blesk" laser. IN: Sb 2, 262-263. (RZhRadiot, 2/78, 2Ye310)
232. Vasyutinskiy, O.S., V.A. Kruzhalov, T.M. Perchanok, D.K. Terekhin, and S.A. Fridrikhov (29). Pulsed r-f discharge as a means of pumping a CO₂ laser. ZhTF, no.2, 1978, 318-326.

3. Deflectors

233. Abramson, I.S., P.N. Asaf'yev, A.N. Mogilevskiy, V.A. Slavnyy, and A.I. Subochev (184). Optical deflector for periodic deflection of an optical beam. Author's certificate USSR, no. 550613, issued March 1977. (RZh Metrolog, 1/78, 1.32.1142)

234. Styroky, J., and P. Burian (NS). Acoustooptic laser beam deflector. Slaboproudy obzor, no.10, 1977, 457-463. (RZhRadiot, 2/78, 2Ye189)

4. Focusers

235. Gorbachev, B.N. (0). Three-dimensional energy distribution for a convergent spherical wave with arbitrary Fresnel numbers. Ois, v.44, no.2, 1978, 351-355.

5. Windows

236. Tomulescu, R., and V.G. Velculescu (NS). Thermal lensing in laser window materials. Revue roumaine de physique, no.5, 1977, 461-469. (RZhF, 1/78, 1D1168)

6. Filters

237. Gorokhov, Yu.G., and A.S. Stratonov (0). Adaptive optical frequency filter. Author's certificate USSR, no. 540231, issued 2 February 1977. (RZhRadiot, 12/77, 12Ye243)
238. Thorwith, G., and W. Polack (NS). Using coherent optical filtering [of spatial frequencies to monitor optical elements]. IN: Sb 1, 354-356. (RZhRadiot, 12/77, 12Ye248)

7. Mirrors

239. Apollonov, V.V., A.I. Barchukov, L.M. Ostrovskaya, V.N. Rodin, V.Yu. Khomich, and M.I. Tsy-pin (1). Feasibility of using intermetallide coatings for developing high-power optical elements. KE, no.2, 1978, 446-449.

240. Dieter, W. (NS). Laser mirror for selecting axial modes in a multimode laser. Patent GDR, no. 123498, issued 20 December 1976. (RZhRadiot, 1/78, 1Yel68)
241. Kolodnyy, G.Ya., Ye.A. Levchuk, B.B. Meshkov, and P.P. Yakovlev (0). Synthesis of anti-reflection coatings by a direct search method. KE, no.1, 1978, 83-88.
242. Stibitz, V. (NS). Nontransmitting mirror for stabilizing the direction of a laser beam. Author's certificate Czechoslovakia, no. 159641, issued 15 August 1975. (RZhRadiot, 1/78, 1Yel71)
243. Tesar, V. (NS). Mirror with electrically controlled shape of the reflecting surface. Author's certificate Czechoslovakia, no. 166399, issued 15 December 1976. (RZhMetrolog, 2/78, 2.32.1212)
244. Zverev, G.M., G.Ya. Kolodnyy, and Yu.D. Poryadin (0). The resistance of interferometric dielectric mirrors to laser radiation. KE, no.1, 1978, 44-50.

8. Detectors

245. Butusov, M.M., D.P. Luk'yanov, and Yu.P. Udoyev (29). Photo-mixing of coherent radiation in spatially-periodic photodetectors. ZhTF, no.2, 1978, 366-369.
246. Butusov, M.M., V.Ye. Strigalev, and Yu.P. Udoyev (29). Experimental investigation of some characteristics of photo-mixers based on spatially periodic photodetectors. ZhTF, no.2, 1978, 370-372.

247. Golubkov, V.S., V.F. Papulovskiy, and D.V. Chashin (0). Tracking system of a synchronized filter for an optical radiation detector. IN: Sb 8, 119-122. (RZhRadiot, 1/78, 1Ye275)
248. Kapelyushnikov, V.M. (0). Design and study of concentrated-luminous-flux radiation detectors. IN: Sb 9, 3-15. (RZhMetrolog, 1/78, 1.32.1007)
249. Kazaryan, R.A., and A.V. Oganesyanyan (59). Comparing the efficiency of the logic structures of two optical signal detectors. IAN Arm, v.13, no.1, 1978, 34-348.
250. Mikheyev, Yu.S., and A.S. Petrov (7). Quasi-optimal filtration in a photodiode detector of short pulse signals. OMP, no.2, 1978, 11-14.
251. Yegorov-Kuz'min, A.S., V.A. Krysanov, and B.S. Kurulev (0). Multichannel optical signal detector. Author's certificate USSR, no. 555551, issued 25 May 1977. (RZhRadiot, 12/77, 12Ye351)

9. Modulators

252. Bezrodnyy, V.I., Ye.A. Ponezha, and Ye.A. Tikhonov (5). New passive Q-switch for Nd³⁺ lasers. KE, no.1, 1978, 68-74.
253. Buzhinskiy, I.M., N.Ye. Bykovskiy, Ye.I. Koryagina, N.V. Pletnev, Yu.V. Senatksiy, G.V. Sklizkov, and V.F. Surkova (0). Forming absorption layers in an optical laser medium by means of penetrating radiation. IN: Sb 10, 11-12. (RZhRadiot, 1/78, 1Ye103)
254. Chetkin, M.V., A.N. Shalygin, A.I. Akhutkina, and A.V. Kiryushin (2). Faraday effect and infrared light modulation in ferrite garnets. KE, no.1, 1978, 158.

255. Dietel, W., and D. Kuehlke (NS). Mode selection in dye and solid-state lasers by spatial hole burning in saturable absorbers. IN: Sb 1, 217-219. (RZhRadiot, 12/77, 12Ye96)
256. Domelunksen, V.G. and M.P. Chayka (0). Three-mirror high-frequency laser radiation modulator. OIS, v.44, no.2, 1978, 336-339.
257. Dzhamalov, T.M., E. Mashiribov, and E.A. Sagatov (227). Effect of a quartz crystal on the operating regime of a Q-switched laser. IN: Tr 7, 75-78. (RZhF, 2/78, 2D1066)
258. Jankiewicz, Z., W. Nowakowski, and J. Szydlak (NS). Shielding a laser system from a return wave. BWAT, no.6, 1977, 121-130. (RZhF, 1/78, 1D1233)
259. Kalashnikov, M.P., Yu.A. Mikhaylov, G.V. Sklizkov, S.I. Fedotov, and A.N. Fedorov (1). High-contrast electrooptic switch. Fizicheskiy institut AN SSSR. Kvantovaya radiofizika. Preprint, no.87, 1977, 16 p. (RZhF, 1/78, 1D1223)
260. Kalendin, V.V., V.I. Kukhtevich, and V.A. Fedoseyev (0). Methods for measuring frequency characteristics of IR electrooptic modulators in the piezoresonance region. IN: Sb 3, 57-64. (RZhMetrolog, 1/78, 1.32.1141)
261. Konovalova, S.A. (111). Electrooptic half-wave switch. Author's certificate USSR, no. 524156, issued 16 November 1976. (RZhRadiot, 1/78, 1Ye238)

262. Makogonenko, A.G., V.S. Neporent, and Yu.A. Stepanov (0). Forced synchronization and frequency locking of laser pulses by means of a phototropic switch. IN: Sb 2, 305. (RZhRadiot, 1/78, 1Ye149)
263. Mel'nikov, L.A. (0). Frequency and amplitude modulation of ring gas laser radiation. RiE, no.2, 1978, 366-374.
264. Vasil'yev, A.N., I.N. Kapustin, O.M. Raspopov, V.S. Smirnov, Ye.Ye. Titova, and A.A. Ul'yanchenko (0). Modulation of low-frequency radiation by combination frequencies. IN: Sb 11, 1978, 21-24. (RZhRadiot, 2/78, 2Ye 183)
265. Zolotov, Ye.M., V.M. Pelekhatyy, A.M. Prokhorov, and Ye.A. Shcherbakov (1). Study and determination of the optimal characteristics of a thin-film LiNbO_3 electrooptic modulator. KE, no.1, 1978, 187.

F. NONLINEAR OPTICS

1. Frequency Conversion

266. Antipenko, B.M., S.P. Voronin, I.G. Podkolzina, A.A. Mak, and Yu.V. Tomashevich (0). 2.06 μ laser converter of neodymium laser radiation. ZhTF P, no.2, 1978, 80.
267. Arkhipkin, A.G., A.K. Popov, and V.P. Timofeyev (210). Conversion of 3.39 μ He-Ne laser radiation into the 330.5 nm range in sodium vapors. ZhETF P, v.27, no.3, 1978, 149-151.
268. Arkhipkin, V.G., A.K. Popov, and V.P. Timofeyev (0). Conversion of 1.06 μ radiation into the 420 nm band in rubidium vapors. ZhTF P, no.3, 1978, 183.

269. Atroshchenko, V.I., and V.I. Odintsov (0). Frequency conversion in dye lasers with a wide angle of divergence, by means of stimulated Raman scattering in an optical resonator. IN: Sb 2, 271-272. (RZhRadiot, 2/78, 2Ye171)
270. Bakhranov, S.A., and I.G. Kirin (0). Frequency conversion under resonance two-photon excitation in alkali metal vapor. Self-action effects. IN: Sb 4, 53-54. (RZhRadiot, 2/78, 2Ye35)
271. Barantsov, V.I., and A.K. Popov (0). Generation of difference frequencies by means of square-law inhomogeneities in alkali metal vapors. IN: Sb 4, 38-39. (RZhRadiot, 2/78, 2Ye179)
272. Batishche, S.A., V.S. Burakov, V.I. Gladushchak, V.A. Mostovnikov, P.A. Naumenkov, G.T. Razdobarin, A.S. Rubanov, A.N. Ruginov, V.V. Semenov, L.V. Tanin, N.V. Tarasenko, and Ye.Ya. Shreyder (0). Third harmonic generation in krypton in the vacuum region of the spectrum. IN: Sb 2, 142-143. (RZhRadiot, 1/78, 1Ye154)
273. Bauerle, D., K. Betzler, H. Hesse, S. Kapphan, and P. Loose (NS). Phase-matched second harmonic generation in urea. Physica status solidi (a), v.42, no.2, 1977, K119-K121. (RZhF, 2/78, 2D933)
274. Bobrovskiy, A.N., G.D. Mul'nikov, and D.N. Sobolenko (0). Generation of the difference frequency of two CO₂ lasers in a ZnSe crystal. KE, no.2, 1978, 444-446.

275. Butylkin, V.S., P.S. Fisher, Yu.G. Khronopulo, and M.F. Shalyayev (0). Resonance generation of a difference frequency during stimulated Raman scattering in a gas placed in a spatially modulated electrostatic field. IN: Sb 4, 34. (RZhRadiot, 2/78, 2Ye178)
276. Drabovich, K.N., A.N. Dubovik, and A.L. Surovegin (0). Higher optical nonlinearities in atoms: dispersion near multiphoton resonances, frequency conversion and spectroscopic applications. IN: Sb 4, 55-57. (RZhRadiot, 2/78, 2Ye181)
277. D'yakov, Yu.Ye., and N.A. Iskanderov (0). Nonstationary generation of the third harmonic of optical noise at a two- and three-photon resonance. IN: Sb 4, 85-87. (RZhRadiot, 2/78, 2Ye180)
278. Grin', Yu.G., Yu.N. Karamzin, and A.P. Sukhorukov (71). Altering the optimal focusing conditions of high-powered laser beams using frequency doubling. KE, no.2, 1978, 460-462.
279. Grin', Yu.G., K.N. Drabovich, Yu.N. Karamzin, A.P. Sukhorukov, and T.V. Shlegel' (0). Diffraction effects during third harmonic generation in two-photon absorption media. IN: Sb 4, 29-31. (RZhRadiot, 2/78, 2Ye177)
280. Khodovoy, V.A. (0). Effect of saturation and nonmonochromaticity of radiation on the processes of resonance conversion of laser frequency. IN: Sb 4, 81-84. (RZhRadiot, 2/78, 2Ye30)

281. Kravchenko, V.I., and A.A. Smirnov (0). Exploiting the 270-400 nm range by multistage frequency conversion of stimulated emission in organic compound solutions and in nonlinear crystals. IN: Sb 2, 157-159. (RZhRadiot, 1/78, 1Ye152)
282. Krochik, G.M., and Yu.G. Khronopulo (0). Frequency conversion based on four-wave resonance parametric processes in vapors and gases. IN: Sb 4, 58-60. (RZhRadiot, 2/78, 2Ye176)
283. Malz, D., K. Schindler, and J. Bergmann (NS). Parametric upconversion of IR radiation in LiIO_3 with pulsed ruby and c-w argon lasers. Acta physica polonica, v. A52, no.1, 1977, 101-109. (RZhF, 2/78, 2D930)
284. Mishin, V.I., and V.A. Semchishen (0). Operating characteristics of a c-w dye laser, tunable by a holographic diffraction lattice. IN: Sb 2, 298-299. (RZhRadiot, 2/78, 2Ye100)
285. Pivtsov, V.S., and K.G. Folin (0). Narrowing of the lasing spectrum and frequency tuning in solid-state lasers. IN: Sb 4, 47. (RZhRadiot, 2/78, 2Ye164)
286. Popov, A.K. (0). Nonlinear resonance optics of gaseous systems. Avtometriya, no.1, 1978, 112-128.
287. Popov, A.K. (0). Conference on resonant nonlinear frequency conversion of laser radiation (Krasnoyarsk, 7-9 September, 1977). KE, no.2, 1978, 412.

288. Reinhold, B., and D. Sonnefeld (NS). Using lithium iodate for intracavity frequency doubling of millisecond YAG:Nd laser pulses. IN: Sb 1, 300-301. (RZhRadiot, 12/77, 12Ye101)

289. Timofeyev, V.P., V.I. Barantsov, and A.K. Popov (0). Conditions for frequency conversion in c-w ion and dye lasers in various metal vapors. IN: Sb 4, 35-37. (RZhRadiot, 2/78, 2Ye174)

2. Parametric Processes

290. Dzhotyan, G.P., and Yu.Ye. D'yakov (2). Theory of a double resonant parametric light oscillator with multimode pumping. KE, no.2, 1978, 331-336.

291. Mista, L., V. Perinova, J. Perina, and Z. Braunerova (NS). Quantum statistical properties of a degenerate parametric amplification process. Acta physica polonica, V. A51, no.5, 1977, 739-751. (RZhF, 1/78, 1D902)

292. Mista, L., and J. Perina (NS). Anticorrelation effect in parametric amplification processes. Czechoslovak Journal of Physics, no.7, 1977, 831-834. (RZhF, 1/78, 1D973)

3. Stimulated Scattering

a. Raman

293. Babenko, V.A., V.I. Malyshev, and A.A. Sychev (1). Study of stimulated Raman scattering excited by picosecond light pulses. KE, no.2, 1978, 431-434.

294. Betin, A.A., and G.A. Pasmanik (8). Nonlinear effects in stimulated Raman scattering associated with heating of the medium by optical phonons. IVUZ radiofiz, no.1, 1978, 55-66.

295. Moskaleva, T.V., A.N. Arbatskaya, and M.M. Sushchinskiy (1). Angular distribution of stimulated Raman scattering at two excitation lines. KSpF, no.8, 1977, 13-19. (RZhF, 2/78, 2D914)
296. Smirnov, V.V. (0). Coherent spectroscopy of Raman light scattering in gases. UFN, v.124, no.1, 1978, 184-185.
297. Steudel, H. (NS). Solitons in stimulated Raman scattering. Annalen der Physik, no. 3, 1977, 188-202. (RZhF, 2/78, 2D919)
298. Yemel'yanov, V.I. (2). Occurrence of space and time fluctuations of stimulated Raman scattering upon saturation of optical phonon generation. FTT, no.2, 1978, 439-443.
299. Zel'dovich, B.Ya., and V.V. Shkunov (1). Limits of the effect of wave front reversal under stimulated Raman scattering. KE, no.1, 1978, 36-43.
- b. Brillouin
300. Borisov, B.N., Yu.I. Kruzhilin, and S.V. Shklyarik (0). Inversion of a neodymium laser wave front by using a Brillouin mirror. ZhTF P, no.3, 1978, 160.
301. Gorbunov, L.M., and A.N. Polyanchikov (1). Stimulated Brillouin scattering in a dispersing laser plasma. ZhETF, v.74, no.2, 1978, 552-562.
- c. Miscellaneous Scattering
302. Key, P.I. (1). The significance of the electrocaloric effect in stimulated scattering of ultrashort pulses. KE, no.1, 1978, 196.

303. Polivanov, Yu.N., and A.T. Sukhodol'skiy (1). Coherent anti-Stokes light scattering of higher orders. KE, no.2, 1978, 449-452.

4. Self-focusing

304. Drobnik, A., and L. Wolf (NS). The effect of self-focusing on the operation of a neodymium glass laser. KE, no.2, 1978, 462-464.
305. Kask, N.Ye., V.V. Radchenko, G.M. Fedorov, and D.B. Chopornyak (98). Dynamics of laser beam compression under thermal nonstationary self-focusing. KE, no.2, 1978, 438-440.
306. Kruzhilin, Yu.I. (0). The possibility of enhancing the brightness at an amplifier output by suppressing self-focusing in the active medium. ZhTF p, no.3, 1978, 176.

5. Acoustic Interaction

307. Aleksandrov, K.S., A.T. Anistratov, and B.V. Beznosikov (0). Acoustooptic properties of $ABCl_3$ crystals. Avtometriya, no.1, 1978, 50-53.
308. Bebchuk, A.S., V.M. Mizin, and N.Ya. Salova (0). On the nature of acoustic perturbations occurring under the effect of laser radiation in a liquid. OIS, v.44, no.1, 1978, 158-159.
309. Boyko, V.A., V.A. Danilychev, B.N. Duvanov, V.D. Zvorykin, and I.V. Kholin (1). Observation of supersonic radiation waves in gases upon exposure to CO_2 laser radiation. KE, no.1, 1978, 216.

310. Gulyayev, Yu.V., V.V. Proklov, and G.N. Shkerdin (15). Light diffraction by sound in solids. UFN, v.124, no.1, 1978, 61-111.

6. General Theory

311. Al'tshuler, G.B. (30). Nonlinear optical system aberrations. IVUZ priboro, no.1, 1978, 86-90.

312. Boyko, I.I. (0). Passage of a high-frequency monochromatic electromagnetic wave through a semiconductor plate with a nonlinear volt-ampere characteristic. ZhTF P, no.1, 1978, 46.

313. Danileyko, Yu.K., A.A. Manenkov, V.S. Nechitaylo, and V.Ya. Khaimov-Mal'kov (1). Nonlinear scattering of light in inhomogeneous media. IN: Tr 1, 75-86.

314. Dubetskiy, B.Ya., and V.M. Semibalamut (10). Nonlinear Ramsey resonance in a number of excited particles. KE, no.1, 1978, 176.

315. Kaplan, A.Ye. (0). Existence criterion of longitudinally inhomogeneous traveling waves in nonlinear electrodynamics. KE, no.1, 1978, 166.

G. SPECTROSCOPY OF LASER MATERIALS

316. Belyy, M.U., G.I. Yermolenko, L.V. Kulik, V.I. Maksin, and A.P. Perepelitsa (0). Study of the luminescence of double molybdates and tungstates of europium, dysprosium and erbium with thallium. ZhPS, v.28, no.2, 1978, 268-272.

317. Bryukhanov, V.V., G.A. Ketsle, and L.V. Levshin (0). Investigation of delayed fluorescence of simple associates of rhodamine 6G in mixtures of polar and nonpolar solvents. ZhPS, v.28, no.2, 1978, 262-267.
318. Butenin, A.V., B.Ya. Kogan, G.A. Kozlova, and T.A. Mironova (0). Measuring the quantum yields in the photodecay of organic dyes under the action of argon laser radiation. IN: Sb 2, 79-81. (RZhRadiot, 2/78, 2Ye417)
319. Gifeysman, Sh.N., A.M. Tkachuk and V.V. Prizmak (0). Optical spectra of a Ho^{3+} ion in LiYF_4 crystals. Ois, v.44, no.1, 1978, 120-126.
320. Kozlov, I.N., V.T. Koyava, V.I. Popechits, A.M. Sarzhevskiy, and A.N. Sevchenko (334). Effect of spectral inhomogeneity on excitation energy transfer in solid solutions. DAN SSSR, v.238, no.1, 1978, 63-65.
321. Shilov, V.B., A.G. Spiro, G.N. Antonevich, G.Ye. Nikolayev, and Yu.A. Stepanov (0). Using picosecond laser spectroscopy to study the relaxation processes in molecules of active media for dye lasers. IN: Sb 2, 180-182. (RZhRadiot, 2/78, 2Ye87)
322. Tomin, V.U., and A.V. Adamushko (0). Study of nonuniform orientational spectral broadening in rhodamines by means of a c-w dye laser. IN: Sb 2, 116-118. (RZhRadiot, 2/78, 2Ye414)
323. Udachin, Yu.M., L.V. Chursinova, L.K. Denisov, N.M. Przheval'skiy, and I.I. Grandberg (0). Spectral-luminescent characteristics of phenyl- and phenylaminopyrazoles. IN: Sb 2, 89-91. (RZhRadiot, 2/78, 2Ye123)

H. ULTRASHORT PULSE GENERATION

324. Abakumov, G.A., A.I. Antipov, G.R. Baldenkov, A.P. Simonov, and V.V. Fadeyev (0). Formation of ultrashort pulses during artificial shortening of the relaxation time of an absorber. IN: Sb 2, 26-28. (RZhRadiot, 2/78, 2Ye138)
325. Galanin, M.D., and Z.A. Chizhikova (0). Measuring the intensity of two-photon-excited luminescence in a dye solution as a method to determine the duration of picosecond laser pulses. IN: Sb 2, 45-46. (RZhRadiot, 1/78, 1Ye254)
326. Khanin, Ya.I. (0). Stable regime for ultrashort pulse generation in a dye laser. IN: Sb 2, 23-24. (RZhRadiot, 2/78, 2Ye102)
327. Khanin, Ya.I. (0). Parameters of stationary pulses generated by a dye laser with saturable absorbers. IN: Sb 2, 25. (RZhRadiot, 1/78, 1Ye60)
328. Kotomtseva, L.A., N.A. Loyko, and A.M. Samson (0). Forming of ultrashort pulses in continuously-pumped dye lasers. IN: Sb 2, 32-33. (RZhRadiot, 2/78, 2Ye99)
329. Narovlyanskaya, M.N., and Ye.A. Tikhonov (0). Picosecond pulse generation in a dye laser with laser pumping. IN: Sb 2, 34-36. (RZhRadiot, 1/78, 1Ye68)

J. THEORETICAL ASPECTS OF ADVANCED LASERS

330. Andreyev, A.V., V.Ya. Galkin, and O.Yu. Tikhomirov (0). Problem of the kinetics of a nuclear gamma laser. IN: Sb 12, 3-15. (RZhRadiot, 1/78, 1Ye147)

331. Vaynshteyn, L.A., A.V. Vinogradov, U.I. Sáfronova, and I.Yu. Skobelev (1). Stimulated emission in the far UV spectral region due to transitions in multicharged neon-like ions. KE, no.2, 1978, 417-421.

K. GENERAL LASER THEORY

332. Arsen'yev, V.A., I.V. Matveyev, and N.D. Ustinov (0). Nano- and microsecond pulse generation in solid-state lasers (survey). KE, no.11, 1977, 2309-2329.
333. Blokhin, A.P., N.A. Borisevich, I.I. Kalosha, and V.A. Tolkachev (3). Polarization of spontaneous and stimulated emission in complex molecule vapors. DAN SSSR, v.238, no.1, 1978, 123-126.
334. Bonch-Bruyevich, A.M., S.G. Przhibel'skiy, and V.V. Khromov (0). Optical processes under close atomic collisions. KE, no.2, 1978, 455-457.
335. Gibadullin, N.S., F.Kh. Mukhtasarov, and V.K. Nurmukhametov (38). Comparative analysis of the parameters of different types of laser regenerators, allowing for the saturation effect. Deposit at VINITI, no. 3583-77, 5 September 1977, 15 p. (RZhF, 1/78, 1D1048)
336. Gruzinskiy, V.V., and S.V. Davydov (0). Characteristics of the spectral kinetics of lasers using polyatomic organic molecules. ZhPS, v.28, no.2, 1978, 224-232.
337. Karpov, S.Yu., M.N. Mizerov, Ye.L. Portnoy, and V.B. Smirnitskiy (4). Light diffraction by a sinusoidally corrugated interface. ZhTF, no.2, 1978, 362-365.

338. Lugovoy, V.N. (1). Mutual quenching of axial modes in dual-mode lasers.
KE, no.2, 1978, 344-348.
339. Prokhorov, A.M., A.A. Spikhal'skiy, and V.A. Sychugov (1). Calculation and optimization of the parameters of the distributed-feedback radiating structure. Part II. KE, no.1, 1978, 122-125.
340. Prokhorov, A.M., A.A. Spikhal'skiy, and V.A. Sychugov (0). Brewster analogs in a diffraction process. ZhTF P, no.1, 1978, 56.
341. Snezhkin, Ye.N., and M.V. Nezhlin (23). Supercooled plasma and the problem of realizing a (quasi) stationary e-beam-pumped recombination laser.
Institut atomnoy energii. IAE-2846, 1977, 32 p. (RZhF, 1/78, 1G369)
342. Yakovlenko, S.I. (0). Laser-induced radiation collisions. KE, no.2, 1978, 259-289.
343. Yeliseyev, P.G., I.N. Zavestovskaya, and I.A. Poluektov (1). Mechanism for displacing atoms in laser crystals under nonradiative recombination.
KE, no.1, 1978, 203.
344. Yemel'yanov, V.I., and Yu.L. Klimontovich (0). Effect of a phase transition on stimulated radiation characteristics of impurity atoms in ferroelectrics. ZhTF P, no.3, 1978, 180.
345. Zaslavskiy, G.M., Yu.A. Kudenko, and A.P. Slivinskiy (0). Thermodynamics and dynamics of spin systems at a phase transition in a superradiant state.
Teoreticheskaya i matematicheskaya fizika, v. 33, no.1, 1977, 95-109.
(RZhF, 2/78, 2D882)

346. Zeyger, S.G. (0). Method of analyzing a coupled amplifier and generator system. OIS, v.44, no.1, 1978, 151-157.
347. Zverev, V.V. (0). Calculating equilibrium averages in a system of molecules interacting with a radiation field. Teoreticheskaya i matematicheskaya fizika, v.32, no.3, 1977, 410-415. (RZhF, 2/78, 2D884)

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

348. Abramova, N.V. (0). Effect of low-power coherent radiation at 6328 Å on the survivability of strain 14 saccharomyces cerevisiae yeasts.
EOM, no. 1, 1978, 65-66.
349. Avdeyev, P.S., Yu.D. Berezin, Yu.P. Gudakovskiy, V.R. Muratov, A.G. Murzin, and V.A. Fromzel' (0). Experimental determination of maximum permissible levels of [eye] exposure to laser radiation at 1.54 μ.
KE, no. 1, 1978, 220.
350. Bogush, N.A., V.A. Mostovnikov, S.I. Mokhoreva, A.T. Pikulev, A.M. Khil'manovich, and I.V. Khokhlov (0). Effect of laser radiation on the reparation processes in biological tissues. IN: Sb 2, 322-323.
(RZhRadiot, 2/78, 2Ye444)
351. Khokhlov, I.V. (0). Dependence of the cytogenetic action of laser radiation on the wavelength. IN: Sb 2, 320-321. (RZhRadiot, 2/78, 2Ye443)
352. Khokhlova, S.A., A.L. Zhitkevich, and A.V. Konstantinov (0).
Effect of laser radiation in the 400-700 nm range on plant specimens.
IN: Sb 2, 339-340. (RZhRadiot, 2/78, 2Ye445)
353. Marupov, R., R.G. Zhbankov, N.V. Ivanova, A.M. Shishko, and P.D. Usmanov (0). Structural properties of cotton grown from laser-irradiated seeds. IN: Sb 2, 343-344. (RZhRadiot, 2/78, 2Ye448)

354. Metelkin, A.N. (0). Studying the geometric properties of living cells by holographic interferometry. IN: Sb 13, 40-46. (RZhRadiot, 12/77, 12Ye488)

355. Rudykh, Z.M. (0). Intensifying the photolysis of bilirubin by means of various biochemical compounds under irradiation by conventional and laser sources of light. AN UkrRSR. Dopovidi. Seriya B. Heolohichni, khimichni ta biolohichni nauky, no. 2, 1978, 170-173.

B. COMMUNICATIONS SYSTEMS

356. Alekseyev, V.V., S.Kh. Batygov, A.A. Zlenko, V.A. Sychugov, and G.P. Shipulo (1). Asymmetrical gratings at the surface of glass lightguides. KE, no. 1, 1978, 218.

357. Andreyev, V.M., Yu.A. Bykovskiy, Ye.N. Vigdorovich, A.V. Makovkin, V.L. Oplesnin, L.F. Plavich, V.L. Smirnov, and A.V. Shmal'ko (16). Plane waveguides based on GaAsP and GaN epitaxial layers for use in integrated optics. KE, no. 1, 1978, 135.

358. Anikin, V.I., A.P. Gorobets, and A.N. Polovinkin (14). Characteristics of plane waveguides produced by a solid-state diffusion method. KE, no. 1, 1978, 181.

359. Belov, A.V., I.F. Belyaletdinov, Ye.M. Dianov, Ye.M. Zolotov, A.M. Prokhorov, and Ye.A. Shcherbakov (1). Model of a fiberoptic communication link with a thin-film modulator. KE, no. 1, 1978, 214.

360. Bochkar', Ye.P., V.Ye. Kul'beda, O.A. Sudakov, and R.G. Dokhikyan (243). Formation of filters by elastooptic delay lines to erase elements in two-dimensional spectra of images in optical systems with a limited aperture. IN: Tr 8, 125-134. (RZhRadiot, 2/78, 2Ye258)
361. Bykovskiy, Yu.A., Ye.N. Vigdorovich, V.L. Smirnov, V.L. Oplesnin, L.F. Plavich, and A.V. Shmal'ko (16). Electrooptic phase modulation of radiation in thin-film waveguides based on epitaxial layers of GaAsP. KE, no. 1, 1978, 146.
362. Goncharenko, A.M., V.K. Kiselev, V.P. Red'ko, and O.D. Shlyakhtichev (3). Optical interference in diffusive and thin-film glass lightguides. KE, no. 2, 1978, 434-436,
363. Gurevich, S.B., N.N. Il'yashenko, B.T. Kolomiyets, V.M. Lyubin, M.V. Sukharev, and V.P. Shilo (4). Optical information carrier. Author's certificate USSR, no. 474287, issued 19 April 1977. (RZhRadiot, 12/77, 12Ye477)
364. Ivanov, V., and V. Nikitov (NS). Atmospheric lines with optical relays. Suobshteniya, no. 9, 1977, [pages not given]. (RZhRadiot, 2/78, 2Ye301)
365. Kal'nitskaya, T.Ya., G.B. Semenov, and V.V. Smirnov (0). Study of smoothing methods for the granular structure at the output of fiber illuminators. Ois, v. 44, no. 2, 1978, 379-382.

366. Khaykin, B.Ye., and F.M. Shaverdyan (264). Transformation of the gradations scale of the tone of the discrete image on the basis of grid coding. KE, no. 1, 1978, 171.
367. Kiselev, V.K., and V.P. Red'ko (434). Thin-film lightguides made from dense crown glass. KE, no. 1, 1978, 134.
368. Kul'beda, V.Ye., and Ye.P. Bochkar' (243). Distortion of image spectra during raster recording on photofilm. IN: Tr 8, 135-142, 222.
(RZhRadiot, 2/78, 2Ye384)
369. Lom, T. (NS). Signal transmission by glass fiber. Sdelovaci tehnika, no. 7, 1977, 269-272. (RZhRadiot, 12/77, 12Ye180)
370. Luk'yanov, V.N., N.V. Shelkov, A.T. Semenov, and S.D. Yakubovich (0). Thin-film laser amplifier with filtration of the spontaneous background noise. IN: Sb 2, 15-17. (RZhRadiot, 2/78, 2Ye165)
371. Mueller, R., and E. Neef (NS). Low-noise amplification of optical pulses by a nonlinear amplifier and absorber. IN: Sb 1, 324-326.
(RZhRadiot, 12/77, 12Ye95)
372. Orlov, L.N., and N.K. Seravkina (0). Some characteristics of waveguide laser resonators. ZhPS, v. 28, no. 2, 1978, 244-246.
373. Pavlov, N.M. (135). Phase fluctuations of the synchronization frequency signal in optical communications lines under nonstationary noise.
IN: Tr 9, 35-41. (RZhRadiot, 2/78, 2Ye293)

374. Rumyantsev, K.Ye., and V.S. Firsov (110). Estimating the scanning time of a given space during the establishment of optical communication.
IN: Tr 10, 101-105. (RZhRadiot, 1/78, 1Ye251)

C. BEAM PROPAGATION

1. In the Atmosphere

375. Agrovskiy, B.S., A.S. Gurvich, and M.A. Kallistratova (64).
Light intensity fluctuations during focusing in a turbulent medium.
IVUZ Radiofiz, no. 2, 1978, 212-216.
376. Agrovskiy, B.S., A.S. Gurvich, and M.A. Kallistratova (0).
Model studies of intensity fluctuations of an optical beam focused in a turbulent medium. IN: Sb 14, 29-33. (RZhRadiot, 12/77, 12Ye284)
377. Akimov, P.I., and S.I. Baskakov (0). Discrete three-dimensional model of beam propagation in a turbulent atmosphere. IN: Sb 14, 224-228.
(RZhRadiot, 12/77, 12Ye296)
378. Aksenov, V.P., and V.L. Mironov (0). Amplification effect of back-scattering in a turbulent atmosphere. IN: Sb 14, 110-114.
(RZhRadiot, 12/77, 12Ye278)
379. Aksenov, V.P., N.Ts. Gomboyev, E.V. Zubritskiy, G.F. Malygina, V.L. Mironov, and E.A. Trubacheva (0). Measuring the dispersion of strong intensity fluctuations during the reflection of laser radiation in a turbulent atmosphere. IN: Sb 14, 139-143. (RZhRadiot, 12/77, 12Ye263)

380. Aksenov, V.P., V.A. Banakh, and V.L. Mironov (0). Coherence of laser radiation reflected in a turbulent atmosphere. IN: Sb 14, 154-159. (RZhRadiot, 12/77, 12Ye264)
381. Akul'shina, L.S., S.V. Zakharchenko, S.D. Pinchuk, and A.M. Skripkin (0). Intensity variation of scattered light during dispersal of a cloud medium. IN: Sb 15, 92-96. (RZhRadiot, 12/77, 12Ye317)
382. Aleksandrov, A.B., and V.A. Loginov (0). Amplification of back-scattering of a laser beam propagating in a turbulent medium. IN: Sb 14, 115-117. (RZhRadiot, 12/77, 12Ye268)
383. Alliluyev, S.P., V.N. Gorelkin, V.V. Dodonov, O.A. Korovkin, L.P. Kotova, I.A. Malkin, V.Ye. Rokotyan, and Ye.N. Khokhlov (0). Numerical calculation of a mutual coherence function. IN: Sb 14, 105-109. (RZhRadiot, 12/77, 12Ye326)
384. Armand, S.A. (0). Limiting the bleaching process of an aqueous aerosol by a self-defocusing effect. IN: Sb 15, 79-81. (RZhRadiot, 12/77, 12Ye286)
385. Astafurov, V.G., and G.N. Glazov (0). Photoresponse statistics and recording regime for a lidar signal. IN: Sb 16, 146-153.
386. Azizyan, G.V., and R.G. Manucharyan (0). Rapid fluctuations in the angle of arrival of radiation passing through the atmosphere. IN: Sb 14, 54-55. (RZhRadiot, 12/77, 12Ye261)

387. Balin, Yu.S., G.M. Krekov, I.V. Samokhvalov, and R.F. Rakhimov (0).
Calculating humidity during laser probing of an atmospheric aerosol.
IN: Sb 16, 47-59.
388. Banakh, G.F., O.K. Voytsekhovskaya, and I.I. Ippolitov (0).
Attenuation of HF chemical laser radiation in the atmosphere.
IN: Sb 17, 7-11. (RZhRadiot, 12/77, 12Ye314)
389. Banakh, V.A., and V.L. Mironov (0). Huygens-Kirchhoff phase approximation in problems of laser propagation in a turbulent atmosphere. IN: Sb 14, 21-25. (RZhRadiot, 12/77, 12Ye15)
390. Belen'kiy, M.S., V.V. Boronoyev, N.Ts. Gomboyev, and V.L. Mironov (0).
Experimental study of the spatial coherence of the field of a laser beam in a turbulent atmosphere. IN: Sb 14, 42-44. (RZhRadiot, 12/77, 12Ye285)
391. Belen'kiy, M.S., A.A. Makarov, V.L. Mironov, and V.V. Pokasov (0).
Saturation in the averaging action of a receiver aperture, from intensity fluctuation of a reflected wave. IN: Sb 14, 136-138.
(RZhRadiot, 12/77, 12Ye327)
392. Belen'kiy, M.S., and V.L. Mironov (0). Diffraction effect of an increase in the spatial coherence of light during reflection in a turbulent atmosphere. IN: Sb 14, 149-153. (RZhRadiot, 12/77, 12Ye295)
393. Belen'kiy, M.S., and V.M. Buldakov (0). Calculating the spectra of spatial coherence functions using beam concepts. IN: Sb 14, 183-188.
(RZhRadiot, 12/77, 12Ye10)

394. Belov, M.L., and V.M. Orlov (0). Fluctuations in the center of gravity of a diffraction image during scattering of optical radiation by a surface in a turbulent atmosphere. IN: Sb 14, 66-69. (RZhRadiot, 12/77, 12Ye277)
395. Belov, M.L., and V.M. Orlov (0). Intensity fluctuations in a diffraction image during scattering of optical radiation by a surface in a turbulent atmosphere. IN: Sb 14, 118-122. (RZhRadiot, 12/77, 12Ye276)
396. Belov, M.L., and V.M. Orlov (0). Structure of a ranging signal in a turbulent atmosphere during nonstationary irradiation of an inclined surface. IN: Sb 14, 199-203. (RZhRadiot, 12/77, 12Ye414)
397. Belov, V.V., G.N. Glazov, and G.M. Krekov (78). Analysis of the laser echo signal from a cloud, taking into account multiple scattering. IVUZ Radiofiz, no. 2, 1978, 275-280.
398. Belyakovich, A.I., M.V. Grinis, G.P. Zheltov, and L.A. Shtan'ko (135). Method for determining various probability characteristics for the propagation of optical radiation in the atmosphere. IN: Tr 9, 103-106. (RZhF, 2/78, 2D854)
399. Belyayev, Ye.B., and Yu.D. Kopytin (0). Evaporation and formation of an emission spectrum of aerosol matter under the action of laser radiation. IN: Sb 15, 124-128. (RZhRadiot, 12/77, 12Ye404)
400. Berger, N.K., and S.M. Burkov (0). Propagation of laser beams with a non-Gaussian profile in a turbulent atmosphere. IN: Sb 14, 218-219. (RZhRadiot, 12/77, 12Ye299)

401. Bezverkhniy, V.A., A.S. Gurvich, and V.V. Pokasov (64). Using coherent analysis to determine wind velocity from optical measurements. FAiO, no. 1, 1978, 102-105.
402. Bezverkhniy, V.A., A.S. Gurvich, and V.V. Pokasov (0). Determining wind velocity from the space-time characteristics of optical intensity fluctuations. IN: Sb 14, 168-169. (RZhRadiot, 12/77, 12Ye430)
403. Birger, Ye.M., and G.M. Kruchenitskiy (0). Evaluating the quality of an image obtained in radiation scattered by a turbulent medium. IN: Sb 14, 170-172. (RZhRadiot, 12/77, 12Ye275)
404. Birger, Ye.M., and G.M. Kruchenitskiy (0). Possibility of studying atmospheric inhomogeneities by a method of spatial filtration of scattered radiation. IN: Sb 14, 173. (RZhRadiot, 12/77, 12Ye300)
405. Brylov, G.B., V.Ye. Zuvev, I.V. Samokhvalov, V.D. Stepanenko, A.A. Fedorov, and V.Ya. Shaparev (207). Measuring the parameters of clouds by a meteorological-radar-station lidar complex. IN: Tr 11, 22-31. (RZhGeofiz, 1/78, 1B118)
406. Bukatyy, V.I., and M.F. Nebol'sin (78). Experimental study of laser radiation intensity fluctuation during propagation in artificial fog. IVUZ Fiz, no. 1, 1978, 19-23.
407. Bukatyy, V.I., and D.P. Chaporov (0). Dynamics of the transparency of a solid aerosol during interaction with pulsed laser radiation. IN: Sb 15, 119-123. (RZhRadiot, 12/77, 12Ye403)

408. Deryagin, V.N., L.Ye. Marasin, Yu.V. Popov, and S.A. Sokolov (0). Study on the possibility of reducing the effect of a turbulent atmosphere on the performance of a laser DME. IN: Sb 18, 66-69. (RZhRadiot, 12/77, 12Ye408)
409. Donchenko, V.A., and M.V. Kabanov (0). Reflection of short pulses of optical radiation from an aerosol atmosphere. IN: Sb 16, 105-112.
410. Drofa, A.S. (0). Spectra of random displacements of an optical beam in the atmosphere. IN: Sb 14, 45-49. (RZhRadiot, 12/77, 12Ye290)
411. Drofa, A.S., and L.I. Yakushkina (0). Relationship between time and space correlations of optical beam displacements in a turbulent atmosphere. IN: Sb 14, 50-53. (RZhRadiot, 12/77, 12Ye260)
412. Fedorishchev, A.Ye. (0). Calculating the refraction of an optical beam in the real atmosphere at the surface boundary layer. IN: Sb 14, 83-87. (RZhRadiot, 12/77, 12Ye298)
413. Fedorov, A.A., V.I. Frolov, and V.Ya. Shaparev (207). Recording echo signals by a meteorological-radar-station lidar complex. IN: Tr 11, 134-139. (RZhGeofiz, 1/78, 1B133)
414. Gabriyelyan, V.L., and R.G. Manucharyan (0). Measuring the absolute refraction above a water surface. IN: Sb 14, 70-71. (RZhRadiot, 12/77, 12Ye322)
415. Genin, V.N., M.V. Kabanov, and N.F. Nelyubin (0). Angular accuracy in observing objects through the atmosphere. IN: Sb 14, 72-73. (RZhRadiot, 12/77, 12Ye411)

416. Godlevskiy, A.P., and Yu.D. Kopytin (0). Study of the emission spectrum of aerosol matter and a gas medium in the channel of an intense laser beam. IN: Sb 14, 220-223. (RZhRadiot, 12/77, 12Ye270)
417. Godlevskiy, A.P., and Yu.D. Kopytin (0). Formation of the fine structure of a lasing spectrum in the transparency microwindow range of gas media. IN: Sb 17, 40-43. (RZhRadiot, 12/77, 12Ye372)
418. Gorelkin, V.N., O.A. Korovkin, L.P. Kotova, I.A. Malkin, and V.Ye. Rokotyanyan (0). Degree of coherence of a bounded beam propagating in a turbulent atmosphere. IN: Sb 14, 101-104. (RZhRadiot, 12/77, 12Ye291)
419. Grishin, A.I., M.V. Panchenko, Yu.A. Pkhalagov, V.N. Uzhegov, and A.G. Tumakov (0). Comparative studies of the optical characteristics of sea haze by lidar, nephelometric and base-line methods. IN: Sb 16, 163-169.
420. Gudzenko, A.I., V.Ye. Zuyev, V.V. Pokasov, V.I. Shishlov, and N.Ye. Yakovlev (0). System for automation of scientific research at the Institute of Atmospheric Optics. IN: Sb 19, 106-109. (RZhGeofiz, 2/78, 2B81)
421. Gurvich, A.S., V.M. Dzhulakyan, and R.A. Kazaryan (0). Measuring the longitudinal correlation of a laser beam in a turbulent atmosphere. IN: Sb 14, 34-36. (RZhRadiot, 12/77, 12Ye294)
422. Klimkin, V.M., and P.D. Kolbycheva (0). Absorption of 5.54μ Ca+H₂ laser radiation by water vapor. IN: Sb 17, 12-13. (RZhRadiot, 12/77, 12Ye375)

423. Kolosov, V.V., and A.V. Kuzikovskiy (0). Focusing and defocusing of light during an aerosol explosion in laser beams. IN: Sb 15, 32-35. (RZhRadiot, 12/77, 12Ye316)
424. Kopilevich, Yu.I., G.B. Sochilin, and V.V. Frolov (0). Geometrical optics method in the problem of the propagation of a bound optical beam through a turbulent atmosphere. IN: Sb 14, 97-100. (RZhRadiot, 12/77, 12Ye266)
425. Korkhov, L.Ye., V.I. Lavrukovich, and A.V. Sidorenko (0). Effect of atmospheric turbulence on an SHF subcarrier of laser radiation. IN: Sb 14, 229-231. (RZhRadiot, 12/77, 12Ye288)
426. Kostin, B.S., and I.E. Naats (0). Methods for evaluating the regularization parameter in inverse problems of aerosol light scattering. IN: Sb 16, 84-89.
427. Kovalev, V.A., Ye.Ye. Rybakov, and G.G. Shchukin (207). Some characteristics of lidar signals during low cloud cover. IN: Tr 11, 32-39. (RZhGeofiz, 1/78, 1B146)
428. Krekov, G.M., and R.F. Rakhimov (0). Distribution of molecular and aerosol scattering components during two-frequency probing of the stratosphere. IN: Sb 16, 96-104.
429. Kruchenitskiy, G.M., and Ye.M. Birger (0). Study of laser radiation passing through a medium, using a method of spatial heterodyning. IN: Sb 17, 65. (RZhRadiot, 12/77, 12Ye325)

430. Kushtin, I.F. (0). Determining the angles of ground refraction by the characteristics of the atmosphere near a radiation detector.
IN: Sb 14, 88-92. (RZhRadiot, 12/77, 12Ye320)
431. Kuzikovskiy, A.V., and L.K. Chistyakova (0). Gasdynamic regimes in the explosion of a water droplet under the action of pulsed CO₂ laser radiation. IN: Sb 15, 10-13. (RZhRadiot, 12/77, 12Ye374)
432. Lagutin, M.F., V.Ye. Mel'nikov, N.P. Mustetsov, and V.A. Stonoga (0). Studying atmospheric sodium by optical ranging. IN: Sb 2, 310-312. (RZhRadiot, 2/78, 2Ye438)
433. Livshits, G.Sh. (0). Aerosol absorption in the ultraviolet.
IN: Sb 17, 88-90. (RZhRadiot, 12/77, 12Ye312)
434. Lopasov, V.P., Yu.S. Makushkin, A.A. Mitsel', and Yu.N. Ponomarev (0). Attenuation of high-power ruby laser radiation in the atmosphere by absorption saturation. IN: Sb 15, 173-176. (RZhRadiot, 12/77, 12Ye287)
435. Lopasov, V.P., and L.N. Sinitza (0). Investigation of the absorption spectrum of CO₂ gas in a neodymium laser radiation path. ZhPS, v. 28, no. 1, 1978, 60-63.
436. Lopasov, V.P., Yu.S. Makushkin, A.A. Mitsel', and Yu.N. Ponomarev (78). Attenuation of high-power pulsed ruby laser radiation in the atmosphere under conditions of resonance absorption by water vapor. IVUZ Fiz, no. 2, 1978, 7-12.

437. Lopasov, V.P., Yu.S. Makushkin, A.A. Mitsel', and Yu.N. Ponomarev (78). Nonlinear transmission of pulsed ruby laser radiation through the atmosphere. Deposit at VINITI, no. 4276-77. (Cited in IVUZ Fiz, no. 2, 1978, 157)
438. Loskutov, V.S., and G.M. Strelkov (0). Self-action of a laser beam dispersing an aqueous aerosol. IN: Sb 15, 82-86. (RZhRadiot, 12/77, 12Ye319)
439. Lukin, I.P. (0). Phase fluctuations of a modulating oscillation propagating over a path with reflection. IN: Sb 14, 214-217. (RZhRadiot, 12/77, 12Ye302)
440. Lukin, V.P., V.V. Pokasov, and V.A. Tartakovskiy (0). Wave focusing in a turbulent atmosphere. IN: Sb 14, 210-213. (RZhRadiot, 12/77, 12Ye303)
441. Lukin, V.P., and V.V. Nosov (0). Spectrum of atmospheric turbulence. IN: Sb 17, 189-193. (RZhRadiot, 12/77, 12Ye282)
442. Makarov, A.A., and V.V. Pokasov (0). Determining the structural parameter of the index of refraction from optical ranging measurements. IN: Sb 14, 179-182. (RZhRadiot, 12/77, 12Ye346)
443. Malakhov, A.N., S.N. Molodtsov, and A.I. Saichev (0). Probability distribution of intensity fluctuations in laser radiation in media with large-scale random inhomogeneities. IN: Sb 14, 11-15. (RZhRadiot, 12/77, 12Ye257)

444. Marichev, V.N., I.V. Samokhvalov, and A.V. Sosnin (0). Methods for lidar measurements of humidity in a free atmosphere. IN: Sb 16, 137-140.
445. Maslich, D.I., B.T. Tlustyak, and N.I. Kravtsov (0). Vertical refraction of optical beams in a shelf zone. IN: Sb 14, 93-96.
(RZhRadiot, 12/77, 12Ye324)
446. Matviyenko, G.G., and I.V. Samokhvalov (0). Laser measurements of wind velocity by a correlation method. IN: Sb 16, 113-124.
447. Mironov, V.L., and V.V. Nosov (0). Random displacements of images in the focus of a telescope while ranging in a turbulent atmosphere. IN: Sb 14, 61-65. (RZhRadiot, 12/77, 12Ye413)
448. Muratov, V.R., P.S., Avdeyev, Yu.D. Berezin, S.A. Kariglazov, V.I. Kolbasov, Yu.I. Kopilevich, and G.B. Sochilin (0). Evaluating the efficiency of the energy transfer of radiation between two spaced apertures in a turbulent atmosphere. IN: Sb 14, 206-209.
(RZhRadiot, 12/77, 12Ye309)
449. Murav'yev, N.I., T.A. Postnikova, and A.M. Cheremukhin (0). Distribution law for a number of spatial intensity surges in a transverse cross-section of optical beams in the atmosphere. IN: Sb 14, 39-41. (RZhRadiot, 12/77, 12Ye265)
450. Naats, I.E. (0). Qualitative methods in the theory of polydisperse light scattering and their application to inverse problems of laser probing. IN: Sb 16, 69-83.

451. Nelyubina, V.P., and N.F. Nelyubin (0). Calculating refraction at large zenith distances. IN: Sb 14, 74-77. (RZhRadiot, 12/77, 12Ye259)
452. Nosov, V.V. (0). Fluctuations in the size of an optical beam in a turbulent atmosphere. IN: Sb 14, 56-60. (RZhRadiot, 12/77, 12Ye293)
453. Patrushev, G.Ya. (0). Dispersion and spatial correlation of reflected radiation in a turbulent atmosphere. IN: Sb 14, 123-126. (RZhRadiot, 12/77, 12Ye311)
454. Patrushev, G.Ya. (0). Time spectra of the fluctuations of a reflected wave beam field in a turbulent atmosphere. IN: Sb 14, 127-130. (RZhRadiot, 12/77, 12Ye308)
455. Pilipenko, V.A., V.V. Poddubnyy, and B.Ye. Trivozhenko (0). Algorithms for identifying large-scale dispersive inhomogeneities during laser probing of a turbulent medium. IN: Sb 14, 174-178. (RZhRadiot, 12/77, 12Ye281)
456. Pogodayev, V.A., and A.Ye. Rozhdestvenskiy (0). Optical breakdown in transparent droplets, initiated by a single-pulse ruby laser. IN: Sb 15, 15-16. (RZhRadiot, 12/77, 12Ye373)
457. Pogodayev, V.A., and A.Ye. Rozhdestvenskiy (78). Motion of small weakly absorbing water drops in a bounded laser beam. ZhTF, no. 1, 1978, 187-188.
458. Serbin, A.I., A.M. Brounshteyn, and K.V. Kazakova (207). Propagation of CO₂ laser radiation over a horizontal path in the surface boundary layer. IN: Tr 11, 101-108. (RZhGeofiz, 1/78, 1B147)

459. Sorokin, Yu.V. (0). Statistical characteristics of a quasicohherent field during scattering by aerosols. IN: Sb 17, 79-83. (RZhRadiot, 12/77, 12Ye315)
460. Svirkunov, P.N. (0). Possibility of self-focusing during dispersal of a cloud medium by laser radiation. IN: Sb 15, 115-118. (RZhRadiot, 12/77, 12Ye318)
461. Taklaya, A.A. (0). Power fluctuations during laser beam wander in a turbulent atmosphere. IN: Sb 14, 144-148. (RZhRadiot, 12/77, 12Ye304)
462. Taklaya, A.A. (255). Wandering laser beam in a turbulent atmosphere. Part 1. Density distribution for the probability of power fluctuation. KE, no. 1, 1978, 152.
463. Taklaya, A.A. (255). Wandering laser beam in a turbulent atmosphere. Part 2. Error probability in receiving a binary signal. KE, no. 1, 1978, 155.
464. Tuzova, S.I. (0). Frequency spectrum of intensity fluctuations of a modulated optical wave scattered by an aerosol moving in a turbulent atmosphere. IN: Sb 14, 131-135. (RZhRadiot, 12/77, 12Ye292)
465. Veretennikov, V.V. (0). Constructing normal solutions of inverse problems in laser probing. IN: Sb 16, 90-95.
466. Volkovitskiy, O.A. (0). Experimental study of the effect of CO₂ laser radiation on a droplet cloud medium. Meteorologiya i gidrologiya, no. 9, 1977, 12-23. (RZhGeofiz, 2/78, 2B102)

467. Volkovitskiy, O.A., and A.F. Nerushev (0). Effect of size reduction of evaporated droplets on the refraction of a CO₂ laser beam.
IN: Sb 15, 74-78. (RZhRadiot, 12/77, 12Ye258)
468. Voytsekhovskiy, A.V., Yu.V. Lilenko, A.S. Petrov, I.V. Samokhvalov, A.V. Sosnin, and G.S. Khmel'nitskiy (0). Results of a lidar study on backscattering of CO₂ laser radiation. IN: Sb 16, 141-145.
469. Yakovlev, V.A. (0). Nomogram for determining the index of refraction of air at various altitudes in a mountain area. IN: Sb 14, 78-82.
(RZhRadiot, 12/77, 12Ye280)
470. Zakharchenko, S.V., S.M. Kolomiyets, and A.M. Skripkin (0).
Ionization of a disperse medium by laser radiation. IN: Sb 15, 148-150. (RZhRadiot, 12/77, 12Ye279)
471. Zhukov, A.F., G.Ya. Patrushev, and R.Sh. Tsvyk (0). Spectra of intensity fluctuations of optical beams in a turbulent atmosphere.
IN: Sb 14, 97-100. (RZhRadiot, 12/77, 12Ye267)
472. Zuyev, V.Ye., G.M. Krekov, and M.M. Krekova (0). Laser probing of an atmospheric aerosol (theoretical aspects). IN: Sb 16, 3-46.
473. Zuyev, V.Ye., G.O. Zadde, S.I. Kavkyanov, and B.V. Kaul' (0).
Interpreting lidar signals from a region of large optical thicknesses.
IN: Sb 16, 60-68.
474. Zuyev, V.Ye., I.V. Samokhvalov, A.V. Sosnin, and G.S. Khmel'nitskiy (0).
Study of the attenuation of tunable CO₂ laser radiation over horizontal paths in the surface boundary layer. IN: Sb 16, 115-136.

2. In Liquids

475. Askar'yan, G.A., N.P. Datkevich, Ye.K. Karlova, N.N. Kononov, G.P. Kuz'min, and B.M. Manzon (1). Repulsion of objects from a water surface upon exposure to laser radiation (light-vapor cushion). KE, no. 1, 1978, 192.
476. Bezrodnyy, V.I., V.I. Vashchuk, and Ye.A. Tikhonov (5). Instability of the propagation of intense radiation in a liquid. ZhTF, no. 1, 1978, 151-159.
477. Bunkin, F.V., A.I. Malyarovskiy, V.G. Mikhalevich, and G.P. Shipulo (1). Experimental study of the acoustic field of a moving optoacoustic antenna. KE, no. 2, 1978, 457-459.
478. Klyshko, D.N., and V.V. Fadeyev (2). Remote determination of the impurity concentration in water by calibrated Raman laser spectroscopy. DAN SSSR, v. 238, no. 2, 1978, 320-323.
479. Sladky, P., R. Danielius, V. Sirutkaitis, and M. Boudys (NS). Photoacoustic effect in water with nanosecond and picosecond laser pulses. Czechoslovak Journal of Physics, v. B27, no. 9, 1977, 1075-1078. (RZhF, 2/78, 2D1053)

3. Theory

480. Belousova, L.A. (321). Properties of Gaussian elliptical beams. IAN B, no. 1, 1978, 91-100.

481. Kruchenitskiy, G.M. (0). A modification of a parabolic approximation.
IN: Sb 14, 26-28. (RZhRadiot, 12/77, 12Ye329)
482. Molodtsov, S.N., and A.I. Saichev (0). Eikonal statistics and frequency correlation of optical beams propagating in a large-scale randomly inhomogeneous medium. IN: Sb 14, 16-20. (RZhRadiot, 12/77, 12Ye301)
483. Taklaya, A.A. (0). Errors in measuring the moments of log-normal fluctuations. IN: Sb 14, 204-205. (RZhRadiot, 12/77, 12Ye330)
484. Terent'yev, Yu.I. (0). Existence of an optical beam deflection zone in an optically denser medium above an interface of two optically homogeneous media. IN: Sb 17, 14-18. (RZhRadiot, 12/77, 12Ye321)
485. Terent'yev, Yu. I. (0). Existence of a dispersion zone of optical beam deflection in an optically less dense medium above the interface of two optically homogeneous media. IN: Sb 17, 19-23. (RZhRadiot, 12/77, 12Ye323)
486. Zavorotnyy, V.U., V.I. Klyatskin, and V.I. Tatarskiy (0). Asymptotic behavior of higher moments of the field of an optical wave propagating behind a phase screen. IN: Sb 14, 3-6. (RZhRadiot, 12/77, 12Ye328)
487. Zavorotnyy, V.U., V.I. Klyatskin, and V.I. Tatarskiy (0). Asymptotic behavior of higher moments of the field of an optical wave propagating in a randomly inhomogeneous medium. IN: Sb 14, 7-10. (RZhRadiot, 12/77, 12Ye272)

D. COMPUTER TECHNOLOGY

488. Morozov, V.N. (1). Associative memory with parallel search.
KE, no. 1, 1978, 7-12.
489. Mtskeradze, G.Sh., A.A. Yermakov, I.N. Kompanets, and V.Ya. Remezov (1).
Individually addressable liquid-crystal controlled transparency.
KE, no. 1, 1978, 209.
490. Nikolayev, F.Ya. (0). Device for processing output information of
optical correlators. IN: Sb 13, 20-22. (RZhRadiot, 1/78, 1Ye233)
491. Pilipovich, V.A., V.I. Polyakov, and A.V. Burakov (299). Analyzing
the operation of a device to control electrooptical instruments for
optical processing of information. IAN B, no. 2, 1978, 109-113.
492. Presnov, V.A., V.N. Il'nitskiy, K.V. Mosketi, and I.V. Slepnev (0).
Optoelectronics of perception and recording of information.
IN: Sb 20, 115-121. (RZhRadiot, 1/78, 1Ye218)
493. Volkov, V.V., N.S. Karaseva, L.P. Lukasevich, Ye.V. Potapov, and
A.V. Rakov (0). A linear transparency based on lithium niobate.
Avtometriya, no. 1, 1978, 108-111.
494. Volkov, V.V., N.I. Plotnikova, Yu.I. Plotnikov, A.V. Rakov, and Yu.P.
Smirnov (0). Controlled transparency with matrix addressing.
KE, no. 1, 1978, 131.
495. Zubov, V.A., M.M. Sushchinskiy, and A.V. Krayskiy (1). Photoelectric
recording of optical fields using correlation processing. KE, no. 11,
1977, 2396-2402

E. HOLOGRAPHY

496. Bazakutsa, V.A., L.G. Voinova, V.K. Osetskaya, Ya.S. Pavlyak, N. Kharizanov, and V. Venkov (0). Various physical parameters of holographic media based on As_2Si_3 . IN: Sb 21, 296-297. (RZhRadiot, 12/77, 12Ye478)
497. Belov, Yu.I., E.M. Zuykova, L.A. Pasmanik, and V.I. Turchin (8). A method of recording holograms of nonoptical fields. IVUZ Radiofiz, no. 2, 1978, 205-211.
498. Belyakov, L.V., D.N. Goryachev, and O.M. Sreseli (4). Method for controlling the process of manufacturing holographic diffraction gratings. Otkr izobr, no. 1, 1978, 587432.
499. Borzyak, P.G., M.S. Brodin, A.A. Borshch, V.I. Volkov, V.V. Ovchar, and D.T. Tarashchenko (5). Semiconductor material for recording dynamic phase holograms. Author's certificate USSR, no. 528802, issued 30 May 1977. (RZhRadiot, 2/78, 2Ye475)
500. Bulatov, Yu.P. (0). Study on optimizing the response of silver-halide emulsions for nonlinear recording of holograms. Deposit at VINITI, no. 3501-77, 29 August 1977, 11 p. (RZhF, 1/78, 1D1258)
501. Bykovskiy, Yu.A., A.V. Makovkin, Yu.N. Kul'chin, V.L. Smirnov, and A.V. Shmal'ko (16). Using optical fibers to record Fourier holograms with high information density. KE, no. 1, 1978, 223.

502. Dukhopel, I.I., T.V. Simonenko, S.Ya. Lovkov, and A.P. Ovechkin (0). Effect of the quality of wave fronts on the shape of holographic interference bands. IN: Sb 22, 44-45. (RZhRadiot, 2/78, 2Ye460)
503. Gerasimov, V.B., and V.I. Orlov (0). Wavefront reconstruction during light scattering by acoustic waves, and dynamic holography. KE, no. 2, 1978, 436-437.
504. Gerke, R.R., Ye.D. Voyeykova, V.A. Veydenbakh, G.I. Koval', and T.G. Dubrovina (7). Holographic diffraction grating. OMP, no. 2, 1978, 64-65.
505. Gnatyuk, L.N., M.L. Gurari, V.N. Zhiganov, L.A. Kulevskiy, S.N. Marchenko, A.M. Prokhorov, V.V. Smirnov, and B.M. Stepanov (1). Hologram generation at 2.76 μ and measurement of the $\text{CaF}_2:\text{Er}^{3+}$ crystal laser radiation line width by a holographic method. KE, no. 1, 1978, 164.
506. Greysukh, G.I. (0). Monochromatic aberrations of an optical lens-hologram system. OIS, v. 44, no. 1, 1978, 168-172.
507. Kamshilin, A.A., M.P. Petrov, S.I. Stepanov, and A.V. Khomenko (0). Optical recording of information and diffraction of light in photorefractive crystals. Avtometriya, no. 1, 1978, 16-26.
508. Komar, V.G., I.P. Nalimov, Yu.N. Ovechkis, I.U. Fedchuk, and A.Kh. Shakirov (231). Recording of holographic screens for the projection of three-dimensional images. TKiT, no. 1, 1978, 15-17.

509. Koreshev, S.N. (0). Diffraction efficiency of discrete binary phase holograms. OIS, v. 44, no. 1, 1978, 173-177.
510. Kuvshinskiy, N.G., N.I. Sokolov, and L.Ya. Tantsyura (51). Carrier for recording phase holograms. Otkr izobr, no. 7, 1978, no. 594478.
511. Leshchev, A.A., and V.G. Sidorovich (0). Theory of light wave conversion by reflecting three-dimensional holograms. OIS, v. 44, no. 2, 1978, 302-308.
512. Mikaelyan, A.L., E.Kh. Gulanyan, Ye.I. Dmitriyeva, and I.R. Dorosh (0). Reflective holograms in $\text{LiNbO}_3\text{:Fe}$ crystals. KE, no. 2, 1978, 440-442.
513. Mustafin, K.S. (0). Analysis of achromatized hologram lens systems on the basis of the ray tautochronism principle. OIS, v. 44, no. 1, 1978, 164-167.
514. Mustafin, K.S., and V.A. Seleznev (0). Method for obtaining interferograms. Otkr izobr, no. 8, 1978, 344791.
515. Nalimov, I.P., and V.A. Zhukov (231). Apparatus for embossing relief holograms. TKiT, no. 2, 1978, 10-13.
516. Petrov, K.N., and Yu.P. Presnyakov (0). Holographic interferometry of a corrosion process. OIS, v. 44, no. 2, 1978, 309-311.
517. Provornov, Yu.S., and N.D. Sil'chuk (305). Study of some methods of drying holograms. TKiT, no. 2, 1978, 14-16.

518. Ruzek, J., and M. Kucharski (NS). Photochromic salicylideneaniline as a recording material for holography. Czechoslovak Journal of Physics, v. B27, no. 8, 1977, 839-344. (RZhF, 2/78, 2D1129)
519. Turyanitsa, I.I., D.G. Semak, and A.A. Kikineshi (0). Study of the conditions for holographic recording on thin chalcogenide glassy semiconductor layers. IN: Sb 21, 266. (RZhRadiot, 1/78, 1Ye357)
520. Vaytkus, Y., Y. Vishchakas, and K. Yarashyunas (49). Recording pulsed holograms in semiconductors. Litovskiy fizicheskii sbornik, no. 1, 1978, 7-15.
521. Vinetskiy, V.L., and N.V. Kukhtarev (5). Geometric factors in dynamic holographic conversion of light beams. KE, no. 2, 1978, 405-411.
522. Vlasov, N.G., S.N. Smirnova, and A.Ye. Shtan'ko (0). Basic principles in the construction of achromatic holographic systems. IN: Sb 8, 83-89. (RZhRadiot, 1/78, 1Ye349)
523. Vorozheykina, L.F., V.V. Mumladze, T.G. Khulordava, and I.D. Shatalin (0). Recording holograms in NaCl crystals exposed to He-Ne laser radiation. ZhTF P, no. 2, 1978, 99.
524. Yarmosh, N.A., V.K. Yerokhovets, and A.A. Boriskevich (414). Image sharpness in recording and reconstruction of Fourier microholograms. IAN B, no. 2, 1978, 95-100.
525. Zhivotov, V.K., M.F. Krotov, and M.D. Suleymenov (0). Resolution capability of multibeam holograms. ZhTF, no. 2, 1978, 400-402.

F. LASER-INDUCED CHEMICAL REACTIONS

526. Akulin, V.M., S.S. Alimpiyev, N.V. Karlov, and B.G. Sartakov (1). Collisionless dissociation mechanism for polyatomic molecules. ZhETF, v. 74, no. 2, 1978, 490-500.
527. Alekseyev, V.A., and A.V. Malyugin (1). The effect of collisions on saturation of the Doppler line contour. KE, no. 11, 1977, 2472-2475.
528. Balykin, V.I., V.S. Letokhov, V.I. Mishin, and V.A. Semchishen (72). Kinetics of photophysical and photochemical processes in the selective excitation of ortho-I₂ by laser radiation. Institut spektroskopii AN SSSR. Preprint, no. 3, 1976, 52 p. (RZhF, 2/78, 2D1042)
529. Bekov, G.I., V.S. Letokhov, and V.I. Mishin (72). Laser photoionization detector of single sodium atoms through the Rydberg state. ZhETF P, v. 27, no. 1, 1978, 52-56.
530. Bekov, G.I., V.S. Letokhov, and V.I. Mishin (0). Ionization by an electric field of Rb⁸⁵ and Rb⁸⁷ isotopes selectively excited in Rydberg states by two dye lasers. IN: Sb 2, 362-363. (RZhRadiot, 2/78, 2Ye434)
531. Darmanyan, A.P. (0). Laser photolysis of dicarbocyanine dyes. IN: Sb 2, 196-198. (RZhRadiot, 2/78, 2Ye439)
532. Karlov, N.V. (0). Laser isotope separation. UFN, v. 124, no. 1, 1978, 183-184.
533. Letokhov, V.S., V.I. Mishin, and A.A. Puretskiy (0). Selective photoionization of atoms by laser radiation. IN: Sb 23, 3-6. (RZhF, 2/78, 2D1044)

534. Orayevskiy, A.N., A.V. Pankratov, A.N. Skachkov, and V.M. Shabarshin (1). Laser chemical decomposition of monosilane. KhVE, no. 1, 1978, 59-61.
535. Pankratov, A.V., A.N. Skachkov, and V.A. Umrikhin (179). Decomposition of monosilane under the joint action of infrared laser and ultraviolet radiation. DAN SSSR, v. 238, no. 1, 1978, 150-153.
536. Papernov, S.M., G.V. Shlyapnikov, and M.L. Yanson (23,109). Photodissociation of excited vibrational molecules. DAN SSSR, v. 238, no. 2, 1978, 324-327.
537. Tkeshelashvili, G.I. (0). Second All-Union Conference-Seminar on Laser Separation of Isotopes. Atomnaya energiya, v. 43, no. 2, 1977, 147-148. (RZhR, 1/78, 1D1036)
538. Vasilenko, L.S., T.Ya. Popova, N.N. Rubtsova, and M.N. Skvortsov (10,109). Study of molecular relaxation in SF₆ by an amplitude-modulated wave method. KE, no. 1, 1978, 56-62.
539. Zhbankov, R.G., N.V. Ivanova, Ye.V. Korolik, N.I. Insarova, and R.M. Marupov (0). Effect of laser radiation on the structure of rigid chain polymers. IN: Sb 2, 329-330. (RZhRadiot, 1/78, 1Ye281)
540. Zhestokova, T.P., V.K. Polkovnikov, O.N. Nepomnyashchiy, P.Ya. Glazunov, and A.K. Pikayev (0). Pulsed photolysis of a laser liquid based 4-methylum belliferon. IN: Sb 2, 189-191. (RZhRadiot, 1/78, 1Ye65)

G. MEASUREMENT OF LASER PARAMETERS

541. Alekseyev, V.N., A.A. Gorokhov, L.S. Dovger, B.M. Sedov, and A.D. Starikov (0). Optical distortions of a light beam in a large-aperture disc amplifier. KE, no. 1, 1978, 168.
542. Astrov, Yu.A., Ye.V. Beregulin, P.M. Valov, L.G. Paritskiy, L.M. Portsel', S.M. Ryvkin, and O.M. Sreseli (4). Photographic device for high-speed recording of the spatial radiation distribution of a pulsed CO₂ laser. ZhTF, no. 2, 1978, 393-396.
543. Aver'yanov, K.P., L.P. Ignat'yeva, Yu.V. Speranskiy, B.M. Stepanov, and V.P. Churakov (0). Device for measuring light pulse parameters. Otkr izobr, no. 8, 1978, 595635.
544. Berger, N.K., I.A. Deryugin, and A.V. Mikheyenko (401). Phase distribution measurement in a laser beam. PTE, no. 1, 1978, 197-198.
545. Bismukhametov, K.A., V.I. Bobrik, Yu.D. Kolomnikov, and A.K. Toropov (0). Relative measurements of the 3.39 and 0.63 μ radiation wavelengths of highly stable lasers. IT, no. 1, 1978, 31-33.
546. Dubrov, M.N. (0). Measurements of short-term frequency instability of lasers using large interferometers. Ois, v. 44, no. 1, 1978, 161-163.
547. Dzhibladze, M.I., L.E. Lazarev, T.Ya. Chelidze, and Z.G. Esiashvili (40). Angular distribution of induced photons. IN: Tr 12, 45-52. (RZhF, 1/77, 1D884)

548. Godlevskiy, A.P., and Yu.D. Kopytin (0). Fine structure formation of the laser emission spectrum in transparency microwindows of gas media. OIS, v. 44, no. 2, 1978, 320-324.
549. Gol'dort, V.G., V.F. Zakhar'yash, and B.A. Kurnevich (10). Wideband module for laser frequency clamping. PTE, no. 1, 1978, 201-203.
550. Gorchakov, A.P., A.A. Popesku, and V.S. Solomatin (2). Nonlinear spectrograph using a silver thiogallate crystal. KE, no. 2, 1978, 413-415.
551. Gorcharuk, I.M., L.A. Kotomtseva, and A.M. Samson (0). Laser radiation spectrum and some questions on intracavity spectroscopy. ZhPS, v. 28, no. 2, 1978, 238-244.
552. Grif, G.I. (0). Measuring the frequency of linear and ring lasers.
IN: Sb 24, 190-193. (RZhRadiot, 12/77, 12Ye335)
553. Gryaznov, M.I., Yu.M. Gryaznov, and A.A. Chestov (0). Measuring the radiation parameters of pulsed dye lasers by an integral method.
IN: Sb 2, 276-277. (RZhRadiot, 2/78, 2Ye343)
554. Herman, M.A., B. Wiktor, J. Biernacki, and A. Biernacki (NS). Measuring system with a Michelson interferometer for studying the time coherence of radiation from uncoupled lasers and LED's. Pomiary, Automatyka, Kontrola, no. 10, 1977, 375-376. (RZhMetrolog, 2/78, 2.32.1158)

555. Isayev, S.K., L.S. Korniyenko, and B.G. Skuybin (0). Analyzing the time structure of single-pulse laser radiation. IN: Sb 8, 169-174.
(RZhRadiot, 1/78, 1Ye151)
556. Isyanova, Ye.D., V.M. Ovchinnikov, G.G. Paritskaya, R.I. Sakayev, and I.M. Slobodyanyuk (0). Calibration of a radiation spectrum with an accuracy up to the extracted linewidth of a narrowband tunable laser. IN: Sb 2, 287-288. (RZhRadiot, 2/78, 2Ye348)
557. Kapralov, V.P. (0). Recording of a radiation spectrum in a working standard based on gas lasers. Metrologiya, no. 2, 1978, 58-60.
558. Kibovskiy, V.T., V.A. Kosinets, M.B. Mulukayeva, N.P. Sul'zhenko, and B.V. Uryson (0). Universal instrument for measuring the energy characteristics of radiation. IN: Sb 3, 45-48. (RZhMetrolog, 1/78, 1.32.1014)
559. Kuznetsov, V.P., V.I. Sachkov, and B.M. Stepanov (0). Methods for selecting standard energy, spectrum, and time ranges for means of measuring energy parameters of laser radiation. IT, no. 2, 1978, 47-48.
560. Kvapil, J., B. Perner, and Jos Kvapil (NS). Excited-state absorption and energy output of a laser ruby. Czechoslovak Journal of Physics, no. 7, 1977, 802-807. (RZhF, 1/78, 1D1058)
561. Lomzin, A.F., M.I. Golovey, V.I. Kovalev, D.Sh. Mash, V.V. Morozov, A.N. Orayevskiy, and F.S. Fayzullof (1). Photographic recording of a single-pulse CO₂ laser radiation spectrum under parametric up-conversion in a proustite crystal. KE, no. 1, 1978, 128.

562. Muntyan, K.I., B.I. Rubinshteyn, and V.S. Solov'yev (0). Device for measuring the radiation energy of Q-switched pulsed lasers. Author's certificate USSR, no. 505063, issued 13 January 1977. (RZhRadiot, 12/77, 12Ye332)
563. Newieki, R., W. Michalski, and E. Plinski (NS). Noise, fluctuations and stabilization of the output power in CO₂ lasers. IN: Sb 1, 516-518. (RZhRadiot, 12/77, 12Ye26)
564. Nowicki, M., and Z. Niechoda (NS). Optical calorimeter for measuring the energy of high-power laser pulses. Pomiary, Automatyka, Kontrola, no. 5, 1977, 174-176. (RZhF, 1/78, 1D1216)
565. Privalov, V.Ye. (0). Fluctuations in a gas laser discharge. Metrologiya, no. 2, 1978, 22-28.
566. Teslenko, A.I., V.D. Kukush, and L.A. Didyk (35). Miniature laser radiation power meter. PTE, no. 1, 1978, 204-205.
567. Tuchin, V.V. (0). Dynamics of the effect of parameter fluctuations on the output radiation of gas lasers. Metrologiya, no. 2, 1978, 28-38.
568. Vasil'yev, L.A., Yu.B. Morozov, V.A. Pykhtin, A.K. Semenov, Yu.P. Timofeyev, and S.A. Fridman (0). Using luminescent screens to measure spectral characteristics of IR pulsed lasers. KE, no. 1, 1978, 201.
569. Verevkin, Yu.K., and V.I. Talanov (8). Method for measuring the power of a subnanosecond luminous flux. Author's certificate USSR, no. 555478, issued 14 June 1977. (RZhRadiot, 12/77, 12Ye331)

570. Voytovich, A.P., A.A. Pavlyushchik, and A.P. Shkadarevich (0).
Use of magneto-optic methods for atomic spectral analysis. DAN B,
no. 9, 1977, 801-804. (RZhRadiot, 12/77, 12Ye345)

571. Yegorov, Yu.P., G.I. Rukman, B.M. Stepanov, and A.V. Khromov (0).
Device for measuring the energy parameters of laser radiation.
Author's certificate USSR, no. 505064, issued 12 January 1977.
(RZhMetrolog, 1/78, 1.32.1000)

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

572. Abramov, L.I. (0). Aerosol generators for a laser Doppler velocimeter.
IN: Sb 22, 22-24. (RZhRadiot, 12/77, 12Ye457)

573. Anan'in, O.B., D.F. Besspalov, Yu.L. Bykovskiy, Yu.P. Kozyrev, K.I.
Kozlovskiy, A.S. Tsybin, and A.Ye. Shikanov (0). Experimental study
of a laser neutron generator. IN: Izotopy v SSSR, no. 49, 1977,
41-45. (RZhMetrolog, 1/78, 1.32.1154)

574. Andronova, I.A., Yu.A. Mamayev, and N.A. Markelov (426). Effect of
back-scatter on the operation of a ring laser with a methane cell.
KE, no. 1, 1978, 75-82.

575. Anokhov, S.P., Yu.Yu. Zhupan, V.I. Kravchenko, and V.V. Tarabrov (5).
Laser [with a ring dispersion resonator]. Author's certificate USSR,
no. 474475, issued 26 September 1977. (RZhRadiot, 2/78, 2Ye162)

576. Antonov, Ye.N., and Ye.B. Berik (0). Interference effects in intra-
resonator spectroscopy. IN: Sb 2, 364-365. (RZhRadiot, 2/78, 2Ye407)

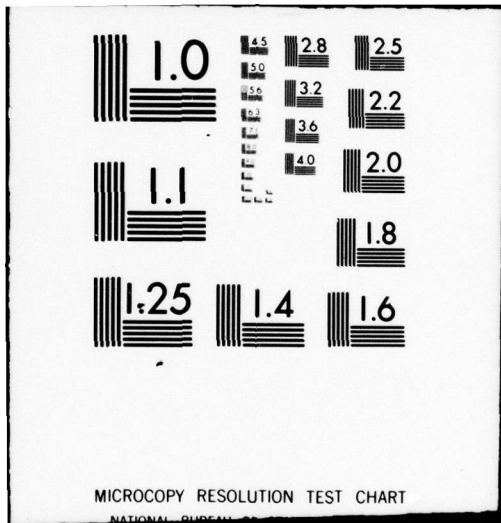
577. Arendt, V.G., L.P. Godenko, M.V. Danileyko, and V.S. Mashkevich (5).
Compound ring resonator modes. KE, no. 1, 1978, 63-67.
578. Arsen'yan, T.I., A.A. Semenov, and A.A. Tishchenko (0). Using a two-beam interferometer to transmit images through a randomly inhomogeneous medium. IN: Sb 14, 163-167. (RZhRadiot, 12/77, 12Ye271)
579. Auslender, A.L., V.M. Ginzburg, and B.M. Stepanov (0). Using a holographic correlator for operational analysis of electrocardiograms. IN: Sb 13, 6-13. (RZhRadiot, 1/78, 1Ye359)
580. Auslender, A.L., V.M. Ginzburg, V.I. Kovalenko, B.M. Stepanov, and V.A. Shishkina (0). Holographic correlator for operational monitoring of lens raster systems. IN: Sb 13, 14-15. (RZhRadiot, 1/78, 1Ye358)
581. Bayev, V.M., T.P. Belikova, E.A. Sviridenkov, and A.F. Suchkov (1).
Intracavity spectroscopy using c-w and quasi-c-w lasers. ZhETF, v. 74, no. 1, 1978, 43-56.
582. Belanov, A.S., and Ye.M. Dianov (1). Self-filtering ring optical waveguides. KE, no. 1, 1978, 138.
583. Belevtseva, L.I., Ye.A. Korolev, Yu.D. Pushkin, and N.V. Kirillova (0).
Interferometer. Author's certificate USSR, no. 532755, issued 22 February 1977. (RZhF, 1/78, 1D1449)
584. Belozerov, A.F., I.S. Zeylikovich, and N.M. Spornik (0). Holographic interferometer. Otkr izobr, no. 5, 1978, 532279.

585. Belozarov, A.F., A.N. Berezkin, L.T. Mustafina, and A.I. Razumovskaya (0). Holographic methods for studying low-density gas flows. IN: Sb 22, 45-46. (RZhF, 1/78, 1D1270)
586. Bel'skiy, A.M., T.M. Nesterenko, and A.P. Khapalyuk (0). Structure of the radiation field of a Fabry-Perot resonator filled with an active medium with a quadratic inhomogeneity. ZhPS, v. 28, no. 2, 1978, 323-328.
587. Bodner, V.A., Yu.F. Zastrogin, and A.M. Korolev (0). Laser interferometer for automatic monitoring of slight amplitude vibrations. IN: Sb 25, 13-16. (RZhF, 1/78, 1D1450)
588. Bozhkov, A.I., F.V. Bunkin, A.I. Kolomenskiy, A.I. Malyarovskiy, and V.G. Mikhalevich (0). Study of the acoustic field of a moving optoacoustic antenna. IN: Sb 26, 5-8. (RZhRadiot, 12/77, 12Ye461)
589. Brunner, W., and H. Paul (NS). Intracavity absorption spectroscopy with short pumping pulses and restricted mode competition. Annalen der Physik, no. 3, 1977, 213-218. (RZhF, 2/78, 2D1094)
590. Burakov, V.S., V.V. Zhukovskiy, and A.A. Stavrov (3). Expansion of the dynamic range of the intracavity method for measuring optical densities. KE, no. 1, 1978, 13-19.
591. Burakov, V.S., L.A. Kotomtseva, P.Ya. Misakov, and S.N. Raykov (0). Investigation of the sensitivity of the intracavity method of analysis by using lasers with solutions of complex organic compounds. ZhPS, v. 28, no. 2, 1978, 218-223.

592. Busygin, A.I., and B.Sh. Ul'masbayev (0). Laser ion source for the MI-1309 mass spectrometer. PTE, no. 1, 1978, 164-167.
593. Bykovskiy, Yu.A., G.I. Zhuravlev, V.M. Gladskoy, V.G. Degtyarev, and V.N. Nevolin (0). Laser mass spectrometry method to analyze elements of geological and space objects. ZhTF, no. 2, 1978, 382-385.
594. Dorfman, A.G. (447). Using optical holography to study explosive processes in a solid medium. AN GruzSSR. Soobshcheniya, v. 90, no. 2, 1978, 309-312.
595. Dreyden, G.V., V.S. Markov, G.V. Ostrovskaya, Yu.I. Ostrovskiy, M.V. Petrov, V.N. Filippov, A.G. Frank, A.Z. Khodzhayev, and Ye.N. Shedova (1). Cinema-holographic investigation of a current layer. Fizika plazmy, no. 1, 1978, 14-17.
596. Dubrovin, S.A., V.Ye. Klyuch, N.N. Pupchenko, and N.G. Shishkanov (0). Using a spark chamber for stencil holography of gamma-irradiated objects. IN: Sb 13, 55-60. (RZhRadiot, 12/77, 12Ye468)
597. D'yakonov, A.M., Yu.S. Kapshin, V.V. Klyubin, V.A. Noskin, and V.M. Rysakov (0). High-resolution spectrometer with optical heterodyning. IN: Sb 27, 293-296. (RZhRadiot, 12/77, 12Ye151)
598. Dyuzhev, G.A., A.M. Mirzabekov, N.K. Mitrofanov, Yu.I. Ostrovskiy, and Ye.N. Shedova (0). Resonance holographic interferometry of a low-temperature cesium plasma, using a tunable dye laser as the light source. IN: Sb 2, 333-335. (RZhRadiot, 1/78, 1Ye363)

599. Gintoft, R.I., F.V. Karpushko, A.S. Kiryeyev, I.A. Morozov, and Ye.V. Pan'ko (0). Metrological dye laser and its use for quality control of optical element surfaces. IN: Sb 2, 326-328. (RZhMetrolog, 1/78, 1.32.997)
600. Godlevskiy, A.P., and Yu.D. Kopytin (0). Highly sensitive intracavity adsorption spectroscopy of surfactants, adsorbed gases and aerosols. IN: Sb 17, 44-47. (RZhRadiot, 12/77, 12Ye99)
601. Golovan, A.A., and A.V. Salmin (24). Laser vibration gyroscope. IVUZ Priboro, no. 1, 1978, 58-62.
602. Gorcharuk, I.M., L.A. Kotomtseva, and A.M. Samson (0). Sensitivity of intracavity methods for determining the spectral characteristics of the substance under study, according to the variation in the lasing spectrum of dye lasers. IN: Sb 2, 371-372. (RZhRadiot, 2/78, 2Ye408)
603. Gordiyenko, V.M., A.B. Reshilov, and V.I. Shmal'gauzen (2). Stroboscopic observation of optoacoustic interactions. Akusticheskiy zhurnal, no. 1, 1978, 132-134.
604. Gorodnichev, V.A., T.M. Yengoyan, V.A. Kaygorodov, and A.F. Sil'nitskiy (0). Determining the concentration of NO₂ in air by an absorption method using organic compound lasers. IN: Sb 2, 366-367. (RZhRadiot, 2/78, 2Ye436)
605. Grinev, A.Yu., and Ye.N. Voronin (0). Conversion of the space-time spectrum by antenna arrays with signal processing by coherent optics methods. IVUZ Radioelektr, no. 2, 1978, 74-83.

606. Grodzovskiy, G.L. (0). Optimal systems of laser Doppler velocimeters for aerodynamic studies. IN: Sb 22, 13-15. (RZhRadiot, 12/77, 12Ye454)
607. Gubkin, Yu.S., and I.M. Nagibina (0). Method of determining the relative fringe number in holographic interferometry. ZhPS, v. 28, no. 2, 1978, 214-217.
608. Guseva, I.N., and V.A. Kramarenko (0). Holographic method for determining the saturation temperature of a solution. IN: Sb 13, 52-54. (RZhRadiot, 12/77, 12Ye484)
609. Hertz, J. (NS). Results and trends of ultrashort-time spectroscopy. IN: Sb 1, 31. (RZhRadiot, 11/77, 11Ye363)
610. Ignat'yev, B.V., and A.A. Sobol' (0). System for tuning out luminescence in an investigation of Raman scattering in single crystals, using a copper vapor laser. ZhTF P, no. 3, 1978, 142.
611. Il'in, V.G., G.O. Karapetyan, and M.N. Polyanskiy (0). Measurement of local values of the refractive index of inhomogeneous media. ZhPS, v. 28, no. 1, 1978, 160-163.
612. Ivanov, F.P., A.F. Polyakov, and B.S. Rinkevichyus (74). Investigating a viscous-gravitational flow in an annular vertical channel by using a laser anemometer. TVT, no. 1, 1978, 217-219.
613. Izakson, G.M., and N.A. Simkina (0). Holographic device for student training and scientific research. IN: Sb 28, 30-31. (RZhRadiot, 12/77, 12Ye466)



614. Kalimov, A.G., V.S. Kozlov, M.V. Stabnikov, V.I. Tarakanov, and M.A. Tombak (0). Holographic discharge chamber with improved efficiency. ZhTF P, no. 20, 1977, 1057-1060. (RZhRadiot, 2/78, 2Ye468)
615. Kalinovskiy, V.L. (0). Possibility of using the total internal reflection effect to monitor the parameters of gases. IN: Sb 3, 65-68. (RZhRadiot, 1/78, 1Ye258)
616. Karasev, V.A., M.I. Landman, V.P. Popov, and V.M. Salimov (0). Measuring the group velocity of light in resonance media by nonsynchronous modulation of tunable laser radiation. IN: Sb 2, 324-325. (RZhRadiot, 2/78, 2Ye357)
617. Karlin, O.G., A.V. Lukin, K.S. Mustafin, and R.A. Rafikov (0). Holographic method for monitoring optical surfaces. Otkr izobr, no. 7, 1978, 413374.
618. Karpushko, F.V., and G.V. Sinit'syn (0). Dye sweep lasers and high-speed laser spectroscopy. IN: Sb 2, 278-281. (RZhRadiot, 2/78, 2Ye127)
619. Kleinstaubler, W., and K. Ruechle (NS). Absorption measurement by means of a time-resolved difference signal of two laser pulses. Experimentelle Technik der Physik, no. 4, 1977, 335-340. (RZhMetrolog, 2/78, 2.32.1156)
620. Klement'yev, V.G. (7). Determining the reflecting surface shape for a fast-scanning Fabry-Perot interferometer. OMP, no. 1, 1978, 63-65.
621. Kopilevich, Yu.I. (0). Reconstruction of a turbulence spectrum by means of the time characteristics of a shadowgraph signal. ZhPMTF, no. 1, 1978, 73-77.

622. Koronkevich, V.P., and V.A. Khanov (0). Interferometer for studying local phase inhomogeneities of transparent media. IN: Sb 22, 49-51. (RZhF, 1/78, 1D1457)
623. Kovylov, A.F., S.B. Kormer, A.V. Pinegin, B.A. Pilkontsev, and K.B. Yushko (0). Laser Doppler velocimeter. PTE, no. 1, 1978, 205-]07.
624. Kozlovskiy, D.A., D.I. Stasel'ko, and V.L. Strigun (0). Holographic study of acoustooptic distortions of ethanol and aqueous dye solutions, using filtration of ultraviolet flashlamp pumping radiation. IN: Sb 2, 220-222. (RZhRadiot, 2/78, 2Ye485)
625. Kravchenko, V.I., A.A. Smirnov, Yu.Yu. Zhugan, P.M. Petronelli, A.S. Pokarzhevskiy, and I.P. Andreychuk (0). Liquid sweep lasers with programmed wavelength control for spectroscopic studies. IN: Sb 2, 285-286. (RZhRadiot, 1/78, 1Ye83)
626. Kravchenko, V.I. (5). Traveling-wave laser. Author's certificate USSR, no. 297337, issued 5 September 1977. (RZhRadiot, 2/78, 2Ye167)
627. Larionov, N.P., A.V. Lukin, and K.S. Mustafin (0). Artificial hologram of an optical surface. Otkr izobr, no. 7, 1978, 371857.
628. Lisovskiy, F.V., and V.I. Shcheglov (0). Interferometer method of measuring the thickness and wedge angle of epitaxial mixed ferrite-garnet films. IT, no. 2, 1978, 42-44.
629. Lizunov, V.D. (0). Measurement of the coating thickness on cylindrical small diameter specimens. IT, no. 2, 1978, 40-42.

630. Lopasov, V.P., and I.S. Tyryshkin (0). High-speed, high-resolution laser spectrometer. ZhPS, v. 28, no. 2, 1978, 360-363.
631. Mashinskiy, E.I. (0). Error analysis of a laser interferometer used in a seismic pressure detector. IN: Sb 29, 36-43.
632. Mikhaylov, L.K., and A.A. Solov'yev (0). Designing and optimizing a Fabry-Perot interferometer. IN: Sb 2, 289-291. (RZhRadiot, 2/78, 2Ye140)
633. Moroz, E.V., and Yu.P. Presnyakov (0). Using holographic interferometry to study nonstationary gasdynamic flows. IN: Sb 13, 23-29. (RZhRadiot, 1/78, 1Ye361)
634. Moroz, E.V., and K.N. Petrov (0). Adjusting the optical scheme and synchronizing the operation of a UIG-1M [laser system] with a fuel sputtering process. IN: Sb 13, 30-32. (RZhRadiot, 12/77, 12Ye487)
635. Nikogosyan, D.I., and Yu.V. Voroshilov (72,136). Method for orienting single crystals. Author's certificate USSR, no. 521819, issued 5 February 1977. (RZhRadiot, 2/78, 2Ye324)
636. Nikolayev, F.Ya. (0). Use of a pulsed coherent source in a holographic correlator. IN: Sb 13, 16-19. (RZhRadiot, 12/77, 12Ye483)
637. Novikov, V.P., and M.A. Novikov (0). Intraresonator method for studying anisotropy by means of dye lasers. IN: Sb 2, 349-350. (RZhRadiot, 2/78, 2Ye435)

638. Ostrovskaya, G.V., Yu.I. Ostrovskiy, and D.I. Stasel'ko (0).
Current status and prospects of holographic methods for studying phase inhomogeneities. IN: Sb 22, 41-43. (RZhF, 1/78, 1D1264)
639. Ostrovskiy, Yu.I., and L.V. Tanin (0). Preparing surface relief contour maps by holography in opposed beams from a dye laser. IN: Sb 2, 331-332. (RZhRadiot, 2/78, 2Ye491)
640. Pirumov, V.A. (0). Device for determining the angles of inclination of objects. Author's certificate USSR, no. 528446, issued 27 August 1976. (RZhRadiot, 12/77, 12Ye347)
641. Rinkevichyus, B.S. (0). Current status and prospects for the development of laser anemometry. IN: Sb 22, 11-12. (RZhRadiot, 12/77, 12Ye449)
642. Sarkisov, O.M., E.A. Sviridenkov, A.M. Udartsev, V.Zh. Ushakov, M.P. Frolov, and S.G. Cheskis (0). Using intraresonator laser spectroscopy to study the heterogeneous annihilation of radicals. IN: Sb 2, 368-370. (RZhRadiot, 1/78, 1Ye322)
643. Savrukov, N.T., and I.N. Sochilina (0). Field of application and prospects of using holography for scientific, industrial and every-day needs. IN: Sb 30, 80-88. (RZhRadiot, 2/78, 2Ye488)
644. Schneider, H. (NS). Excitation source for high-frequency spectroscopy, particularly spin-resonance spectroscopy. Patent GDR, no. 122883, issued 5 November 1976. (RZhRadiot, 12/77, 12Ye428)

645. Selitskiy, M.N., G.Kh. Dinershteyn, and A.Ya. Kazak (0). Device for measuring the thickness of interference mirror coatings. IT, no. 2, 1978, 44.
646. Shenyavskiy, L.A., and V.I. Shmal'gauzen (2). Polarization interferometer to measure small dynamic deformations. VMU, no. 1, 1978, 125-127.
647. Shkvar, A.Ya. (0). Studying a flow in a plane diffuser by means of a laser Doppler anemometer. MZhiG, no. 1, 1978, 159-161.
648. Shvedova, I.V., I.P. Petrov, Ye.I. Dobkina, and I.P. Mukhlenov (0). Laser method for determining the concentration of the active substances in catalyst granules. Zhurnal prikladnoy khimii, no. 9, 1977, 2110-2112. (RZhF, 2/78, 2D1101)
649. Skvortsov, V.V. (0). Spacing of interference bands in the measuring capacity of a laser Doppler velocimeter. IN: Sb 22, 20-22. (RZhRadiot, 12/77, 12Ye456)
650. Smirnov, A.G. (0). Cinemaholographic interferometry of transparent inhomogeneities. IN: Sb 22, 47-49. (RZhF, 1/78, 1D1262)
651. Smulakovskiy, V.M., and V.S. Solov'yev (0). Determining interferometer length by using a tunable laser. IT, no. 2, 1978, 48-49.
652. Stepanov, B.I. (0). Using dye lasers in spectroscopy and luminescence. IAN Fiz, no. 2, 1978, 260-267.

653. Timofeyeva, G.I. (0). Computation of the width of a ring laser synchronization domain. ZhPS, v. 28, no, 2, 1978, 245-249.
654. Timoshin, Yu.V., N.I. Yakubetskaya, and Z.V. Gornyak (0). Direct prospecting for oil and gas deposits based on diffractational (holographic) conversion of seismic recordings. IN: Sb 31, 458-459. (RZhGeofiz, 2/78, 2D148)
655. Tomson, V.V., and V.M. Afanas'yev (0). Laser navigational equipment for channels and fairways of limited width. IN: Sb 32, 54-61. (RZh Vodny transport, 2/78, 2V168)
656. Tsuprun, V.L., T.G. Samsonidze, and N.A. Kiselev (13). Indexing of spiral objects on microphotographs by comparing the phases of symmetric reflections on an optical diffractometer. Kristallografiya, no. 1, 1978, 73-79.
657. Ulmer, W. (NS). Economic considerations in using CO₂ lasers for industrial production. IN: Sb 1, 292-294. (RZhRadiot, 12/77, 12Ye440)
658. Vallas, S.K., A.S. Provorov, and B.P. Stoychev (0). Tunable source of coherent VUV radiation for spectroscopic applications. IN: Sb 4, 26. (RZhRadiot, 2/78, 2Ye415)
659. Vanyurikhin, A.I., V.P. Gerchanovskaya, and I.M. Minkov (7). Influence of interference effects on the accuracy of an ellipsometer with a quarter-wavelength compensator. OMP, no. 1, 1978, 9-12.

660. Vartapetov, S.K., V.P. Vasil'yev, T.B. Volyak, I.K. Krasyuk, Yu.Ye. Moiseyev, P.P. Pashinin, and V.G. Savel'yev (1). Laser dual-pulse oscillator with continuous time-interval tuning. KE, no. 1, 1978, 179.
661. Vladimirov, A.S., B.V. Golubev, S.Ya. Lovkov, A.P. Ovechkin, V.M. Polyayev, F.F. Pomogayev, and N.Ya. Revtovich (0). Studying supersonic flows by holographic interferometry. IVUZ Mashinostroyeniye, no. 9, 1977, 34-38. (RZhF, 1/78, 1D1269)
662. Wernicke, G., and W. Meschkat (NS). Holographic calibration of piezoelectric oscillation detectors. Radio Fernsehen Elektronik, v. 26, no. 17, 1977, 561-563. (RZhRadiot, 1/78, 1Ye364)
663. Wolf, L. (NS). Signal recovery by coherent optical defectoscopy of materials. Feingeraetetechnik, no. 8, 1977, 339-342. (RZhRadiot, 1/78, 1Ye365)
664. Yerokhin, A.I., N.V. Morachevskiy, and F.S. Fayzullov (1). Laser method for studying the temperature dependence of the index of refraction of condensed media. Fizicheskiy institut AN SSSR. Preprint, no. 122, 1977, 18 p. (RZhF, 1/78, 1D1238)
665. Yertanova, O.N., and I.A. Lepeshinskiy (0). Holographic method for measuring the dimensions of a liquid film in the shear of a jet nozzle with a two-phase operating medium. MZhiG, no. 1, 1978, 153-156.
666. Zagorodnyuk, V.T., and A.S. Kagan (343). Study of an amplitude-phase analyzer for deflections of moving objects relative to a laser beam. IN: Tr 13, 40-43. (RZhF, 1/78, 1D1247)

667. Zaslavskaya, V.R., G.G. Chizhikov, and N.F. Stepanenko (7). Using a YAG laser to measure the linear velocity of moving objects. OMP, no. 2, 1978, 45-47.
668. Zaslavskaya, V.R., and G.G. Chizhikov (0). Method for reducing the intermediate frequency in optical heterodyning. PTE, no. 1, 1978, 195-196.
669. Zaytsev, G.A., and I.A. Khrebtov (0). Frequency properties of thin-film bolometers operating in liquid helium. ZhPS, v. 28, no. 1, 1978, 125-130.
670. Zlenko, Yu.A. (0). Effect of various multiplicative noises on the accuracy of a laser Doppler velocimeter. IN: Sb 22, 18-20. (RZhRadiot, 12/77, 12Ye453)
671. Zverev, V.A., Ye.D. Isyanova, V.M. Ovchinnikov, and D.V. Sergeyev (0). Prospects for designing laser-spectral instruments. IN: Sb 2, 151-152. (RZhRadiot, 2/78, 2Ye413)

2. Laser-Excited Optical Effects

672. Abduyev, A.Kh., A.D. Adukov, B.M. Atayev, R.A. Rabadanov, and D.A. Shaikhov (88). Ultraviolet luminescence of zinc oxide epitaxial layers under one- and two-photon excitations. KE, no. 1, 1978, 206.
673. Agasiyev, A.A., A.Kh. Zeynally, V.I. Tagirov, V.M. Salmanov, and M.A. Sobeikh (86). Obtaining and studying the luminescence of InSe films subjected to laser radiation. IVUZ Fiz, no. 1, 1978, 126-128.

674. Akhmanov, S.A., A.I. Kovrigin, V.I. Kuznetsov, S.M. Pershin, and A.I. Kholodnykh (2). Study of resonant nonlinear molecular susceptibilities, using a tunable IR parametric light oscillator. KE, no. 1, 1978, 189.
675. Akimov, A.V., S.A. Basun, A.A. Kaplyanskiy, and R.A. Titov (4). The effect of thermal pulses on the fluorescence of organic impurity molecules in crystalline n-paraffin matrices. FTT, no. 1, 1978, 220-227.
676. Akishev, Yu.S., A.P. Napartovich, and S.V. Pashkin (23). Study of the trapping instability in a glow discharge in an air flow. Fizika plazmy, no. 1, 1978, 152-158.
677. Aleksandrov, A.S., V.F. Yelesin, Yu.P. Lisovets, V.G. Mikhaylov, I.A. Poluektov, and Yu.M. Popov (1). Propagation of high-powered optical pulses through a semiconductor under interband interaction conditions. KE, no. 2, 1978, 359-370.
678. Alekseyev, N.Ye., V.P. Gapontsev, M.Ye. Zhabotinskiy, and Yu.Ye. Sverchkov (15). Measurement of nonresonance interaction parameters of rare-earth ions in condensed media by the method of selective observation of luminescence kinetics at the line wings. ZhETF P, v. 27, no. 2, 1978, 118-122.
679. Alimov, O.K., T.T. Basiyev, Yu.K. Voron'ko, Yu.V. Gribkov, A.Ya. Karasik, V.V. Osiko, A.M. Prokhorov, and I.A. Shcherbakov (1). Investigation of the structure of nonuniformly-broadened spectra of Nd³⁺ ions in glass by the selective laser excitation method. ZhETF, v. 74, no. 1, 1978, 56-66.

680. Anikin, A.A., V.K. Malinovskiy, and V.A. Tsekhomskiy (0). Spectral studies of silver halide photochromic glass. Avtometriya, no. 1, 1978, 65-71.
681. Anoshin, A.N., Ye.A. Gastilovich, G.T. Kryuchkova, B.K. Sokolov, D.N. Shigorin, and F.Ya. Frolov (0). Selective excitation and investigation of the luminescence of the longwave "multiplet" component in spectra of the solution of 1,4,5,8-tetraoxyanthraquinon in n-octane at 4.2 K. Ois, v. 44, no. 1, 1978, 107-113.
682. Apanasevich, P.A., and A.A. Afanas'yev (3). Stimulated light scattering by free carriers generated in a semiconductor upon absorption of radiation. FTT, no. 1, 1978, 99-103.
683. Arifzhanov, S.B., A.M. Danishevskiy, Ye.L. Ivchenko, S.F. Kochegarov, and V.K. Subashiyev (4). The role of different kinds of transitions in three-photon absorption in InAs. ZhETF, v. 74, no. 1, 1978, 172-177.
684. Arutyunyan, S.L. (37). Nonlinear refractive index of a semiconductor under multiphoton resonance conditions. FTT, no. 1, 1978, 270-271.
685. Aseyev, G.I., M.L. Kats, Ye.I. Krasnikova, B.A. Medvedev, V.K. Nikol'skiy, and T.G. Silkina (0). Bleaching dynamics of the transition between the excited electron states of activator centers in alkali-halide crystals. Ois, v. 44, no. 1, 1978, 202-204.
686. Asnin, V.M., N.I. Mirtskhulava, and A.A. Rogachev (4). Pinch-effect in an electron-hole fluid in germanium. FTT, no. 2, 1978, 444-447.

687. Avakyants, L.P., and D.F. Kiselev (2). Elasticity and photoelasticity of LiTaO_3 in a ferroelectric phase transition. FTT, no. 2, 1978, 611-613.
688. Bazarov, Ye.N., G.A. Gerasimov, V.L. Derbov, M.A. Kovner, and S.K. Potapov (15). Effect of optical resonance detection in gases and its possible use to record narrow resonances. Institut radiotekhniki i elektroniki AN SSSR. Preprint, 1977, 30 p. (RZhRadiot, 2/78, 2Ye416)
689. Belousov, A.V., V.A. Kovarskiy, and E.P. Sinyavskiy (44). Characteristics of light absorption by a quantum system interacting with nonequilibrium phonons. FTT, no. 1, 1978, 205-210.
690. Beregulín, Ye.V., P.M. Valov, and I.D. Yaroshetskiy (4). Study of the cooling and heating by optical carriers in semiconductors. FTP, no. 1, 1978, 109-116.
691. Beregulín, Ye.V., P.M. Valov, and I.D. Yaroshetskiy (4). Experimental investigation of the bleaching phenomenon under electron heating and cooling conditions by light in the intraband junctions in semiconductors. FTP, no. 2, 1978, 239-244.
692. Beterov, I.M., A.A. Chernenko, and A.S. Yatsenko (0). Use of a pulsed dye laser to determine the g-factors of electron transitions in molecules. IN: Sb 2, 351-353. (RZhRadiot, 1/78, 1Ye278)
693. Blinov, S.I., G.A. Zalesskaya, and A.A. Kotov (3). Visible luminescence in acrolein vapor excited by IR radiation from a pulsed CO_2 laser. IAN Fiz, no. 2, 1978, 383-387.

694. Blokh, O.G., L.F. Lutsiv-Shumskiy, and Yu.A. Pirogov (114).
Photoelasticity and electrooptical effect in $\text{HK}_{2(1-x)}\text{D}_{2x}\text{PO}_4$ crystals
under a forbidden deformation. UFZh, no. 1, 1978, 146-148.
695. Bolgar', V.A., V.I. Lebedev, M.G. Tomilin, N.P. Berezin, and M.Ya. Shul'man (7).
Attenuation of the mottled structure of a coherent optics image when using a liquid-crystal screen. OMP, no. 1, 1978, 62-63.
696. Bol'shov, M.A., A.V. Zybin, V.G. Koloshnikov, A.V. Pisarskiy, and A.N. Smirnov (0).
Atomic fluorescence analysis of Pt, Ir, and Eu excited by pulsed dye lasers. ZhPS, v. 28, no. 1, 1978, 45-49.
697. Bonch-Bruyevich, A.M., T.K. Razumova, and I.O. Starobogatov (0).
Reversible birefringence in liquid dye solutions as a function of bleaching dichroism under excitation by high-power polarized radiation.
 IN: Sb 2, 125-126. (RZhRadiot, 2/78, 2Ye424)
698. Bondarev, S.L., G.P. Gurinovich, B.M. Dzhagarov, and K.I. Salokhiddinov (3).
Mechanism for quenching of fluorescence in organic molecules by transition metal ions. IAN Fiz, no. 2, 1978, 430-434.
699. Brodin, M.S., Z.A. Demidenko, K.A. Dmitrenko, and V.Ya. Reznichenko (5).
Role of excitons in two-photon absorption of cadmium sulfide. UFZh, no. 2, 1978, 328-332.
700. Broude, V.L., N.A. Vidmont, D.V. Kazakovtsev, V.V. Korshunov, I.B. Levinson, A.A. Maksimov, I.I. Tartakovskiy, and V.P. Yashnikov (0).
Phonon excitation and propagation in anthracene crystals. ZhETF, v. 74, no. 1, 1978, 314-327.

701. Bryskina, I.V., V.N. Deryagin, L.Ye. Marasin, and Yu.V. Popov (7).
Study of the amplitude-time characteristics of photomultipliers.
OMP, no. 1, 1978, 61-62.
702. Bunkin, A.F., S.G. Ivanov, A.V. Rezov, and M.L. Sybeva (0).
Using a dye laser to study liquid crystals by means of active Raman spectroscopy. IN: Sb 2, 357-359. (RZhRadiot, 2/78, 2Ye409)
703. Bunkin, A.F., S.G. Ivanov, and N.I. Koroteyev (0). Active polarization spectroscopy and coherent ellipsometry of Raman scattering by means of a dye laser. IN: Sb 2, 360-361. (RZhRadiot, 2/78, 2Ye410)
704. Chisty, I.L. (1). Study on the spectra of molecular scattering of light in a series of crystals, by means of a c-w argon ion laser.
IN: Tr 4, 129-201.
705. Danelyus, R., G. Dikchys, V. Kabelka, A. Piskarskas, A. Stabinis, and Ya. Yasevichyute (49). Picosecond spectroscopy of parametric superluminescence. Litovskiy fizicheskiy sbornik, no. 1, 1978, 93-108.
706. Dorokhin, A.V., and A.A. Kotov (3). Long-lasting luminescence in organic compound vapors under laser excitation. IAN Fiz, no. 2, 1978, 349-352.
707. Gavryushin, V.I., V.K. Narkyavichus, and R.A. Baltrameyunas (49).
Automatic device for investigating two-photon absorption spectra in semiconductors. PTE, no. 1, 1978, 186-188.

708. Geller, H.D., G. Goetz, K.D. Klinge, and Nguyen ba Triem (0). Backscattering measurements of As-implanted Si after laser irradiation.
IN: Sb 33, 157-164. (RZhRadiot, 1/78, 1Ye288)
709. Godlevskiy, A.P., and V.A. Kapitanov (0). Change in the spectrum line profile of water vapor upon expansion by foreign gases. ZhPS, v. 28, no. 2, 1978, 204-208.
710. Goncharuk, I.N., V.Yu. Davydov, Ye.A. Ivanova, and E.V. Chisler (4). Interference phenomena in the vibrational spectrum of sodium nitrite. FTT, no. 2, 1978, 481-488.
711. Gruzinskiy, V.V., L.A. Barkova, L.K. Stratskevich, and P.M. Shishlo (3). Fluorescence of multiatomic molecule vapors in a discharge. IAN Fiz, no. 2, 1978, 370-375.
712. Gudayev, O.A., E.G. Kostsov, and V.K. Malinovskiy (0). Injection contact for wideband dielectrics. Avtometriya, no. 1, 1978, 92-96.
713. Herrmann, J., and F. Weidner (NS). Selection of picosecond pulses from a pulse train by means of saturable absorbers and absorption in excited states. Annalen der Physik, no. 2, 1977, 137-149. (RZhF, 2/78, 2D1076)
714. Kanayev, I.F., V.K. Malinovskiy, and B.I. Sturman (0). Experimental studies of the conductivity and photoinduced birefringence in LiNbO_3 crystals. Avtometriya, no. 1, 1978, 26-29.
715. Kazantsev, A.P. (73). Resonance light pressure. UFN, v. 124, no. 1, 1978, 113-145.

716. Khodovoy, V.A., and N.A. Chigir' (0). Study of the absorption spectrum of a two-level system under intense two-photon excitation. ZhETF, v. 74, no. 1, 1978, 67-74.
717. Kilin, S.Ya. (0). Effect of high-power coherent radiation on the spontaneous emission of multiparticle systems. ZhPS, v. 28, no. 2, 1978, 255-261.
718. Krasovskiy, A.N., V.N. Boykov, V.I. Pokagashkin, and D.S. Umreyko (0). Excitation spectra of uranyl crystals in the anti-Stokes region. IN: Sb 2, 354-356. (RZhRadiot, 2/78, 2Ye406)
719. Kuzali, A.S., and A.V. Chekan (0). Experimental study of radiation fields and spectroscopic characteristics of a thin-film optical waveguide with a plane diffraction grating. OIS, v. 44, no. 1, 1978, 148-150.
720. Malakhov, Yu.I. (0). Lifetimes of CuI levels. OIS, v. 44, no. 2, 1978, 214-223.
721. Mal'tseva, I.A., Yu.V. Rud', V.I. Sokolova, and A.D. Smirnova (4). Luminescent properties of CdSnP₂ crystals. UFZh, no. 1, 1978, 46-50.
722. Mavrin, B.N., N.N. Mal'nik, Kh.Ye. Sterin, N.M. Gasanly, and B.M. Dzhavadov (72). Raman scattering spectra of light in an InSe crystal. FTT, no. 2, 1978, 602-603.
723. Mirumyants, S.O., Ye.A. Vandyukov, and V.K. Kozlov (0). Effect of infrared laser radiation on the quasilinear fluorescence spectrum of anthracene vapor. IAN Fiz, no. 2, 1978, 380-382.

724. Nagli, L.Ye., and I.K. Plyavin' (0). Stimulated recombination radiation of activated alkali-halide crystals. OIS, v, 44, no. 1, 1978, 138-142.
725. Nagorskiy, G.A., and Yu.F. Orlov (0). Laser separation of high energy particles according to mass. ZhTF, no. 1, 1978, 129-132.
726. Pavlik, B.D. (0). Controlling the motion and spectrum of an atom by a dye laser beam. IN: Sb 2, 313-314. (RZhRadiot, 2/78, 2Ye420)
727. Personov, R.I. (72). Nature of diffuse bands of electron spectra of organic compound solutions and methods for revealing the latent linear structure in them. IAN Fiz, no. 2, 1978, 242-252.
728. Prochukhan, V.D., and Yu.V. Rud' (4). Prospects for practical application of $A^{II}B^{IV}C_2^V$ semiconductors. FTP, no. 2, 1978, 209-233.
729. Stoylov, Yu.Yu. (1). Study of molecular iodine fluorescence in the 340 nm band. KE, no. 2, 1978, 388-393.
730. Strukov, B.A., Ye.D. Yakushkin, K.A. Minayeva, and V.I. Teleshevskiy (2). Determining the velocity and absorption of ultrasound by optical heterodyning using opposing pulses. PTE, no. 1, 1978, 192-195.
731. Sveshnikova, Ye.B., and S.P. Naumov (0). Energy transfer from organic molecules to rare-earth element ions in high-donor solvents. IAN Fiz, no. 2, 1978, 338-342.
732. Sveshnikova, Ye.B., and S.P. Naumov (0). Mechanism of the nonradiative 5D_1 - 5D_0 transition in the Eu^{3+} ion. OIS, v. 44, no. 1, 1978, 127-132.

733. Tot, B., V.I. Korol'kov, and A.A. Yakovenko (4). Determining the parameters of nonequilibrium charge carriers in weakly doped GaAs by a nonstationary photoeffect method. FTP, no. 1, 1978, 191-194.
734. Treshchalov, A.B., and L.A. Rebane (61). Reorientation of O_2^- and S_2^- centers in the excited electron state in alkali-halide crystals. FTT, no. 2, 1978, 469-475.
735. Venitskiy, V.N., V.V. Yeremenko, and E.V. Matyushkin (36). Light scattering by parametric spin waves in $Y_3Fe_5O_{12}$ under longitudinal pumping. ZhETF P, v. 27, no. 4, 1978, 239-242.
736. Vitukhnovskiy, A.G., and N.D. Zhevandrov (1). Luminescence of rhodamine 6G on the surface of stilbene single crystals. IAN Fiz, no. 2, 1978, 323-327.
737. Voronov, V.V., and Yu.S. Kuz'minov (1). Electric and photoelectric phenomena in single-domain growth of a barium-sodium niobate ferroelectric. FTT, no. 2, 1978, 389-394.
738. Yemel'yanov, V.I., and Yu.L. Klimontovich (2). Laser-field induced phase transition in a system of two-level atoms. ZhETF P, v. 27, no. 1, 1978, 7-9.
739. Zimin, L.G., V.P. Gribkovskiy, S.I. Radautsan, A.Ye. Tsurkan, N.K. Samuylova, and V.I. Verlan (0). Saturation of absorption in ZnTe single crystals doped by group I elements. ZhPS, v. 28, no. 1, 1978, 157-159.

J. BEAM-TARGET INTERACTION

1. Metal Targets

740. Bessarab, A.V., N.V. Zhidkov, S.B. Kormer, D.V. Pavlov, and A.I. Funtikov (0). Change in metal mirror reflection due to laser radiation. KE, no. 2, 1978, 325-330.
741. Gazuko, I.V., I.M. Gryaznov, and L.I. Mirkin (248). Study of zirconium hydride after irradiation by optical laser pulses. NM, no. 1, 1978, 172-174.
742. Rykalin, N.N., A.A. Uglov, and M.M. Nizametdinov (0). The effect of pulsed laser radiation on materials in a broad range of helium pressures. FiKhOM, no. 1, 1978, 24-30.
743. Sultanov, M.A. (0). Analogy in the mechanism of interaction of an ultrashort plasma flow and laser radiation with metals. Deposit at VINITI, no. 3784-77, 27 September 1977, 41 p. (RZhF, 1/78, 1D1161)
744. Welding thick sheet metal by laser. Sdelovaci technika [Czech], no. 9, 1977, 336. (RZhRadiot, 1/78, 1Ye311)

2. Dielectric Targets

745. Artem'yev, Ye.F., V.N. Kalinin, A.G. Murzin, and V.A. Fromzel' (0). Optical strength of lithium metaniobate crystals at 1.54 μ . OIS, v. 44, no. 2, 1978, 290-292.

746. Danileyko, Yu.K., A.A. Manenkov, A.M. Prokhorov, and V.Ya. Khaimov-Mal'kov (1). Surface destruction of laser ruby crystals. IN: Tr 1, 9-30.
747. Danileyko, Yu.K., A.A. Manenkov, and V.S. Nechitaylo (1). Study of internal laser destruction and scattering of light in crystals and glasses. IN: Tr 1, 31-74.
748. Danileyko, Yu.K., A.A. Manenkov, and V.S. Nechitaylo (1). The mechanism of laser damage to transparent materials due to a thermal explosion of absorbing inhomogeneities. KE, no. 1, 1978, 194.
749. Dlugunovich, V.A., and V.N. Snopko (0). Optical temperature measurements during laser heating of the surface of solids. ZhPS, v. 28, no. 2, 1978, 233-237.
750. Liberman, M.A., and M.I. Tribel'skiy (65). Role of chemical reactions in laser destruction of transparent polymers. ZhETF, v. 74, no. 1, 1978, 194-201.
751. Manenkov, A.A. (1). Laser destruction and scattering of light in solids. IN: Tr 1, 3-8.
752. Sultanov, M.A. (0). Action of a shock-compressed plasma and laser radiation on optical glass. Deposit at VINITI, no. 3780-77, 27 September 1977, 25 p. (RZhF, 2/78, 2D1056)

3. Semiconductor Targets

753. Bal'kyavichyus, P.I., A.I. Bumyalis, I.A. Gul'binas, A.S. Dement'yev, I.P. Lukoshyus, and E.K. Maldutis (50). Destruction of GaAs by 1.06 μ laser radiation. Litovskiy fizicheskiy sbornik, no. 1, 1978, 79-92.
754. Danileyko, Yu.K., T.P. Lebedeva, A.A. Manenkov, and A.V. Sidorin (1). Investigation of semiconductor destruction mechanisms by high-power IR laser radiation. ZhETF, v. 74, no. 2, 1978, 765-771.

4. Miscellaneous Studies

755. Benditskiy, A.A., A.A. Bogatikov, M.I. Dukhanina, G.I. Rukman, B.M. Stepanov, and A.V. Khromov (0). Luminescence occurring under the action of laser radiation on NaCl particles. ZhTF P, no. 3, 1978, 135.
756. Rykalin, N.N., A.A. Uglov, and M.M. Nizametdinov (22). The effect of laser radiation on materials in a wide argon pressure range. KE, no. 1, 1978, 89-98.
757. Yepifanov, A.S., A.A. Manenkov, and A.M. Prokhorov (1). Theory of avalanche ionization in solids under the action of an electromagnetic field. IN: Tr 1, 87-129.
758. Zavadovskaya, Ye.K., I.S. Shishkin, M.I. Rudenko, and V.M. Tkachenko (197). Character of the destruction of optical single crystals by pulsed laser radiation. IN: Tr 14, 64-68. (RZhF, 2/78, 2D1058)

K. PLASMA GENERATION AND DIAGNOSTICS

759. Afanas'yev, Yu.V., Ye.G. Gamaliy, I.G. Lebo, and V.B. Rozanov (1).
Hydrodynamic instability and spontaneous magnetic fields in a spherical laser plasma. ZhETF, v. 74, no. 2, 1978, 516-524.
760. Aleksandrov, A.F., S.Yu. Galuzo, A.T. Savichev, and I.B. Timofeyev (2).
Study on the spatial distribution of plasma parameters of a high current pulsed discharge by the Bartels method. ZhTF, no. 1, 1978, 72-79.
761. Askar'yan, G.A., and B.M. Manzon (1). Thermal radiation of microwaves from the shock of a laser explosion in a medium (light spark).
Fizika plazmy, no. 1, 1978, 104-110.
762. Basov, N.G., G.V. Sklizkov, Yu.V. Senatskiy, S.I. Fedotov, and Yu.N. Ol'shevskiy (0). Automation of a high-power laser system for thermo-nuclear experiments. IN: Sb 34, 1-2. (RZhF, 1/78, 1G189)
763. Bogatkin, V.I., L.V. Drugov, G.D. Lobov, and V.V. Shtykov (0).
Possibility of determining the electron density in a dense collisionless plasma by using a CO₂ laser. RiE, no. 1, 1978, 113-116.
764. Boyko, V.A., S.A. Pikuz, and A.Ya. Fayenov (1). Intensities of satellites of resonance lines of He-like ions with Z=12-23 in a laser plasma. KE, no. 2, 1978, 394-404.
765. Boyko, V.A., A.V. Vinogradov, S.A. Pikuz, I.Yu. Skobelev, A.Ya. Fayenov, and Ye.A. Yukov (1). Intensities of the components of resonance doublet hydrogen-like ions in an optically fine laser plasma.
Fizika plazmy, no. 1, 1978, 97-103.

766. Boyko, V.A., S.A. Pikuz, and A.Ya. Fayenov (1). Methods for determining the electron density of a laser plasma by the x-ray spectra of multiple discharge ions. Fizicheskiy institut AN SSSR. Kvantovaya radiofizika. Preprint, no. 26, 1977, 61 p. (RZhF, 2/78, 2D1088)
767. Bulanin, M.O., and A.P. Kouzov (441). Laser induction of translational absorption in noble gases. ZhETF P, v. 27, no. 2, 1978, 94-97.
768. Bunatyan, A.A., V.Ye. Neuvazhayev, L.P. Strotseva, and V.D. Frolov (0). Numerical investigation of the development of perturbations during target compression by a spiked pulse. IN: Sb 35, 83-89.
769. Bunkin, F.V., F.V. Kalinin, and P.P. Pashinin (1). Plasma diagnostics based on four-photon coherent light scattering by an ion acoustic wave. KE, no. 2, 1978, 468-470.
770. Burakov, V.S., P.Ya. Misakov, P.A. Naumenko, S.V. Nechayev, G.T. Razdobarin, V.V. Semenov, L.V. Sokolova, and L.V. Tanin (0). Using dye lasers for plasma diagnostics by a fluorescence method in "Tokamak FT-1". IN: Sb 2, 317-319. (RZhRadiot, 2/78, 2Ye430)
771. Burmasov, V.S., E.P. Kruglyakov, and A.A. Podyminogin (79). Michelson interferometer with a CO₂ laser for measuring plasma density. Fizika plazmy, no. 1, 1978, 140-143.
772. Bykovskiy, Yu.A., Yu.P. Kozyrev, K.I. Kozlovskiy, and A.S. Tsybin (16). The effect of a collision between laser plasma jets in conical targets on plasma parameters in the final expansion stages. KE, no. 2, 1978, 337-343.

773. Feoktistov, L.P., Ye.N. Avrorin, L.F. Varganova, A.D. Tadzhiyev, V.A. Lykov, V.Z. Nechay, and L.I. Shibarshov (0). Hybrid reactor based on laser thermonuclear fusion. KE, no. 2, 1978, 349-358.
774. Gorbunov, L.M., Yu.S. Kas'yanov, V.V. Korobkin, A.N. Polyanichev, and A.N. Shevel'ko (1). Spectral-time measurements of back-scattered radiation of a laser plasma. ZhETF P, v. 27, no. 4, 1978, 242-246.
775. Gudzenko, L.I., and S.I. Yakovlenko (1). Rate of field breakoff in a pulsed plasma laser. KSpF, no. 7, 1977, 3-7. (RZhF, 1/78, 1D-104)
776. Kaliski, S. (NS). Compression of microshells by means of fast ions generated by laser radiation. BAPS, no. 6, 1977, 499-503.
(RZhRadiot, 2/78, 2Ye375)
777. Kaytmazov, S.D., and Ye.I. Shklovskiy (1). Laser plasma in a strong magnetic field. Fizika plazmy, no. 1, 1978, 86-96.
778. Kocic, A. (Yugoslav). Hybrid fusion-fission systems. Tehnicka fizika, no. 13, 1975, 51-58. (RZhF, 1/78, 1G207)
779. Kozlov, G.I., and I.K. Selezneva (17). Numerical investigation of the process of laser spark propagation and the formation of a continuous optical discharge in a focused laser beam. ZhTF, no. 2, 1978, 386-392.
780. Kutovoy, V.D., G.D. Petrov, P.A. Samarskiy, and S.I. Tregubov (140). Homodyne submillimeter interferometer for stationary plasma diagnostics. TVT, no. 1, 1978, 198-200.

781. Nemtsev, I.Z. (118). Distribution of a plasma front along a laser beam of subthreshold intensity. IN: Tr 6, 71-81. (RZhRadiot, 2/78, 2Ye373)
782. Polyanichev, A.N., and V.S. Fetisov (0). Ion recombination in a two-component laser plasma. IN: Sb 35, 227-229. (RZhMekh, 2/78, 2B301)
783. Poyurovskaya, I.Ye., and V.I. Fisher (240). Wave structure of light absorption in gases. ZhTF, no. 1, 1978, 177-182.
784. Pyatnitskiy, L.N., V.M. Batenin, V.S. Zhivopistsev, L.Ya. Margolin, and P.V. Minayev (74). Determining arc discharge plasma parameters in argon and nitrogen by the method of scatter of c-w laser radiation. TVT, no. 1, 1978, 202-205.
785. Romanov, G.S., and Yu.A. Stankevich (0). Development of optical detonation in the flare occurring from laser irradiation of an absorbing target. IN: Sb 36, 102-109. (RZhMekh, 1/78, 1B260)
786. Zaydel', A.N., Yu.V. Koval'chuk, and G.V. Ostrovskaya (0). Study of resonance interaction of dye laser radiation with a laser spark plasma. IN: Sb 2, 315-316. (RZhRadiot, 2/78, 2Ye429)
787. Zolotovskiy, O.A., R.Kh. Kurtmullayev, and B.N. Mironov (0). Diagnostics of a high-temperature plasma by means of submillimeter lasers. IN: Sb 22, 39-40. (RZhRadiot, 12/77, 12Ye437)

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

788. Akayev, A.A., and S.A. Mayorov (0). Kogerentnyye opticheskiye vychislitel'nyye mashiny (Coherent optical computers). Leningrad, Mashinostroyeniye, 1977, 440 p. (KL, 6/78, 5171)
789. Bisyarin, V.P., A.V. Sokolov, Ye.V. Sukhonin, et al (0). Oslableniye lazernogo izlucheniya v gidrometeorakh (Attenuation of laser radiation in hydrometeors). Moskva, Nauka, 1977, 176 p. (KL, 4/78, 3143)
790. Butylkin, V.S., A.Ye. Kaplan, Yu.G. Khronopulo, and Ye.I. Yakubovich (0). Rezonansnyye vzaimodeystviya sveta s veshchestvom (Resonance interactions of light with matter). Moskva, Nauka, 1977, 352 p. (RZhF, 2/78, 2D876)
791. Fridrikhov, S.A. (0). Lazery i upravlyayemy termoyadernyy sintez (Lasers and controlled thermonuclear fusion). Leningrad, Znaniye, 1977, 32 p. (KL, 7/78, 6201)
792. Gazovyye lazery i ikh primeneniye (Gas lasers and their application). Fizicheskiy institut AN SSSR. Trudy, no. 102, 1977, 204 p.
793. Iznar, A.N. (0). Elektronno-opticheskiye pribory (Optoelectronic instruments). Moskva, Mashinostroyeniye, 1977, 264 p. (Cited in TKIT, no. 1, 1978, 89)
794. Lazernoye razrusheniye i rasseyaniye sveta v tverdykh prozrachnykh dielektrikakh (Laser destruction and scattering of light in transparent solid dielectrics). Fizicheskiy institut AN SSSR. Trudy, no. 101, 1978, 150 p.

795. Losev, S.A. (0). Gazodinamicheskiye lazery (Gasdynamic lasers). Moskva, Nauka, 1977, 336 p. (RZhF, 2/78, 2D1020)
796. Rebrin, Yu.K. (0). Upravleniye opticheskim luchom v prostranstve (Controlling an optical beam in space). Moskva, Sovetskoye radio, 1977, 336 p. (RZhRadiot, 1/78, 1Ye155)
797. Vasilenko, G.I. (0). Golograficheskoye opoznavaniye obrazov (Holographic character recognition). Moskva, Sovetskoye radio, 1977, 327 p. (RZhRadiot, 2/78, 2Ye498)
798. Veyko, V.P. (0). Opyt vnedreniya lazernoy obrabotki tonkikh plenok v mikroelektronike (Introduction of laser processing of thin films in microelectronics). Leningrad, LDNTP, 1977, 30 p. (KL, 5/78, 4233)
799. II Vsesoyuznaya konferentsiya "Lazery na osnove slozhnykh organicheskikh soyedineniy i ikh primeneniye," Dushanbe, 27-30 sentyabr' 1977 g. Tezisy (Second All-Union Conference on Lasers Based on Complex Organic Compounds and Their Application, Dushanbe, 27-30 September 1977. Summaries). Minsk, 1977, 387 p. (RZhRadiot, 1/78, 1Ye6)
800. Zuyev, V.Ye., and M.V. Kabanov (0). Perenos opticheskikh signalov v zemnoy atmosfere (v usloviyakh pomekh) (Transmission of optical signals in the earth's atmosphere (under noise conditions)). Moskva, Sovetskoye radio, 1977, 368 p. (RZhGeofiz, 2/78, 2B63)
801. Zuyev, V.Ye., ed. (0). Distantzionnoye zondirovaniye atmosfery (Remote probing of the atmosphere). Novosibirsk, Izd-vo Nauka, Sibirskoye otdeleniye, 1978, 176 p.

IV. SOURCE ABBREVIATIONS

(CIRC Codens)

BAPS	(BAPTA)	Biulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
EOM	(EOBMA)	Elekronnaya obrabotka materialov
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika gorenija i vzryva
FikHOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskija
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr (IVUZB)		Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza

NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OIS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(RZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1		Internationale Tagung. 3rd. Dresden, 28 March-1 April 1977. Laser und ihre Anwendungen. Section 1, no date of publication.
Sb2		Sbornik. Vsesoyuznaya konferentsiya "Lazery na osnove slozhnykh organicheskikh soyedineniy i ikh primeneniye." 2nd. Dushanbe, 27-30 September 1977. Tezisy. Minsk, 1977.
Sb3		Optiko-fizicheskiye izmereniye. Moskva, Izd-vo standartov, 1977.
Sb4		Nelineynyye rezonansnyye preobrazovaniya lazernogo izlucheniya. Tezisy dokladov. Krasnoyarsk, 1977.
Sb5		Fundamental'nyye issledovaniya. Fiziko-matematicheskkiye i tekhnicheskkiye nauki. Novosibirsk, Nauka, 1977.
Sb6		Goreniye i vzryv. Moskva, Nauka, 1977.
Sb7		Khimiya fizicheskikh protsessov goreniya i vzryva. Kinetika khimicheskikh reaktsiy. Chernogolovka, 1977.
Sb8		Peredacha informatsii i yeye obrabotka. Moskva, 1976.
Sb9		Elektronnyye ustroystva kontrolya i izmereniy v promyshlennosti i nauchnykh issledovaniy. Ashkhabad, 1977.

- Sb10 Vsesoyuznaya konferentsiya "Radiatsionnyye efekty v tverdykh telakh," Ashkhabad, 1977. Tezisy dokladov. Ashkhabad, 1977.
- Sb11 Issledovaniye ionosfery i magnitosfery metodami aktivnogo vozdeystviya. Apatity, 1977.
- Sb12 Obrabotka i interpretatsiya fizicheskikh eksperimentov, no. 6, Moskovskiy universitet, 1977.
- Sb13 Golograficheskiye metody i apparatura, primenyayemaya v fizicheskikh issledovaniyakh, i ikh metrologicheskoye obespecheniye. Moskva, 1976.
- Sb14 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 4th. Rasprostraneniye lazernogo izlucheniya v turbulentnoy atmosfere. Tezisy dokladov. Tomsk, 1977.
- Sb15 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 4th. Nelineynnyye efekty pri rasprostraneni lazernogo izlucheniya v atmosfere. Tezisy dokladov. Tomsk, 1977.
- Sb16 Distantсионное зондирование атмосферы. Novosibirsk, Izd-vo Nauka, Sibirskoye otdeleniye, 1978.
- Sb17 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 4th. Pogloshcheniye i rasseyaniye lazernogo izlucheniya gazami i aerolyami atmosfery. Tezisy dokladov. Tomsk, 1977.
- Sb18 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 4th. Metody i apparatura v eksperimental'nykh issledovaniyakh protsessov rasprostraneniya lazernogo izlucheniya v atmosfere. Tezisy dokladov. Tomsk, 1977.
- Sb19 Vsesoyuznaya shkola po avtomatizatsii nauchnykh issledovaniy. 10th. Gelendzhik, 1976. Materialy. Struktura, Tekhnicheskiye sredstva i organizatsiya sistem avtomatizatsii nauchnykh issledovaniy. Leningrad, 1977.
- Sb20 Issledovaniye poluprovodnykh soyedineniy slozhnogo sostava i p-n-perekhodov na ikh osnove, no. 1, Elista, 1976.
- Sb21 Respublikanskaya konferentsiya. Tezisy dokladov. Struktura i fizika svoystva tonkikh plenok. Uzhgorod, 1977.
- Sb22 Fizicheskiye metody issledovaniya prozrachnykh neodnorodnostey. Moskva, 1977.
- Sb23 Khimiya plazmy, no. 4, Moskva, Atomizdat, 1977.
- Sb24 Shirokopolosnyye ustroystva SVCh i sistemy optimal'nogo obrabotki signalov. Novosibirsk, 1976.

- Sb25 Vibratsionnaya tekhnika. Moskva, 1977.
- Sb26 Vsesoyuznaya akusticheskaya konferentsiya. 9th. 1977. Sektsiya Ch. Moskva, 1977.
- Sb27 Teoreticheskaya spektroskopiya. Moskva, 1977.
- Sb28 Gertsenovskiy chteniye. 30th. Fizicheskaya elektronika. Leningrad, 1977.
- Sb29 Razvedochnaya geofizika, no. 81, 1978.
- Sb30 Effektivnost' kapital'nykh vlozheniy i novoy tekhniki, no. 2, Cheboksary, 1977.
- Sb31 Kongressa Karpato-Balkanoy geologicheskoy assotsiatsii. 11th. Materialy. Kiyev, Naukova dumka, 1977.
- Sb32 Sudovozhdeniye, no. 22, Moskva, 1977.
- Sb33 Vsesoyuznoye soveshchaniye po fizike vzaimodeystviya zaryazhennykh chastits s monikristallami. 8th. 1976. Trudy. Moskovskiy universitet, 1977.
- Sb34 Vsemirnaya elektrotekhnicheskaya kongressa, Moskva, 21-25 June 1977, sektsiya 7, no. 17.
- Sb35 Vsesoyuznaya shkoly po chislennym metodam v fizike plazmy. 1st. Zvenigorod, 1974. Materialy. Chislennyye metody v fizike plazmy. Moskva, Nauka, 1977.
- Sb36 Dinamika sploshnoy sredy, no. 29, Novosibirsk, 1977.
- TK1T (TKTEA) Tekhnika kino i televideniya
- Tr1 AN SSSR. Fizicheskiy institut. Trudy, no. 101, 1978.
- Tr2 Samarkandskiy universitet. Trudy, no. 295, 1976.
- Tr3 Azerbaydzhanskiy universitet. Uchenyye zapiski. Seriya fiziko-matematicheskikh nauk, no. 5, 1976.
- Tr4 AN SSSR. Fizicheskiy institut. Trudy, no. 102, 1977.
- Tr5 Severo-Kavkazkiy nauchnyy tsentr vysshey shkoly. Izvestiya. Yestestvennyye nauki, no. 1, 1977.
- Tr6 Moskovskiy fiziko-tekhnicheskiy institut. Seriya Obshchaya i molekulyarnaya fizika. Trudy, no. 9, 1977.
- Tr7 Tashkentskiy universitet. Trudy, no. 525, 1977.
- Tr8 Radiotekhnicheskiy institut AN SSSR. Trudy, no. 27, 1977.
- Tr9 TsNII svyazi. Sbornik nauchnykh trudy, no. 1, 1977.
- Tr10 Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 213, 1977.

Tr11		Glavnaya geofizicheskaya observatoriya. Trudy, no. 395, 1977.
Tr12		Tbilisskiy universitet. Trudy, no. 181, 1976.
Tr13		Severo-Kavkazkiy nauchnyy tsentr vysshey shkoly. Izvestiya. Tekhnicheskiye nauki, no. 2, 1977.
Tr14		Tomskiy politekhnicheskiy institut. Izvestiya, no. 247, 1977.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

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334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom gos universitete).
343. North Caucasus Scientific Center of Higher Education (Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly).
396. "Optika" Special Design Bureau for Scientific Instrument Manufacture, Siberian Branch, AN SSSR (Spetsial'noye konstruktorskoye byuro nauchnogo priborostroyeniya "Optika" SOAN).
401. Khabarovsk Polytechnic Institute (Khabarovskiy politekhnicheskiy institut).
414. Institute of Technical Cybernetics AN BSSR (Institut tekhnicheskoy kibernetiki AN BSSR).
426. Institute of Applied Physics, AN SSSR, Gor'kiy (Institut prikladnoy fiziki AN SSSR).
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442. Institute of High Energy Physics, AN KazSSR, Alma-Ata (Institut fiziki vysokikh energii AN KazSSR).
444. Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki AN KazSSR).
447. Institute of Mining Mechanics, AN GruzSSR (Institut gornoy mekhaniki AN GruzSSR).

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POPELA B	47	RAKOV A V	72	RYL'KOV V V	11		
POPELSKIY A A	31	RAN'SHIKOV V P	20		7,9		
POPESKU A A	80	RASPOPOV D M	39				
POPKOV YU P	1	RAYKOV S N	85				

SEменов V V	40,116	SHISHLO P M	15,162	SLAWYY V A	34	SPIKHAL'SKIY A A	50
SEMIBALAMUT V M	46	SHISHLOV V I	62	SLEPNEV I V	72	SPIRO A G	47
SENATSKIY YU V	37,109	SHKADAREVICH A P	83	SLIVINSKIY A P	50	SPIITSYN YE M	7
SENKEVICH L P	17	SHKARDIN G N	46	SLOBODYANYUK P A	23	SPORNIK N M	84
SENYUSHKIN G YU	7	SHKLOVSKIY YE I	111	SLOBODYANYUK I M	81	SRESELI O M	73,79
SERAVKINA N K	55	SHKLYARIK S V	44	SLOMINSKIY YU L	10,11	STABINIS A	101
SERBIN A I	67	SHKUNOV V V	44	SMIRNITSKIY V B	49	STABNIKOV M V	89
SERGEYEV D V	96	SHKVAR A YA	93	SMIRNOV A A	42,90	STANKEVICH YU A	112
SEROV A P	15	SHLEBEL' T V	41	SMIRNOV A G	93	STARIKOV A D	79
SEROV V V	33,34	SHLYAKHTICHEV O D	54	SMIRNOV A N	100	STAROBOGATOV I O	100
SEVCHENKO A N	47	SHLYAPNIKOV G V	78	SMIRNOV V A	5	STASEL'KO D I	6,90,92
SHABARSHIN V M	78	SHMAL'GAUZEN V I	87,93	SMIRNOV V L	53,54,73	STAVROV A A	60
SHABLYA A V	15	SHMAL'KO A V	53,54,73	SMIRNOV V S	9,17,39	STEPANENKO V D	96
SHAIKHOV D A	96	SHMELEV V M	29	SMIRNOV V V	44,54,74	STEPANENKO N F	96
SHAKIR YU A	22	SHOTOV A P	3	SMIRNOV YU P	72	STEPANOV A I	9
SHAKIROV A KH	74	SHPAK M T	10,15,32	SHIRNOVA A D	103	STEPANOV B I	93
SHALAMOV S P	27	SHREYDER YE YA	40	SHIRNOVA S N	76	STEPANOV B M	74,79,81,83
SHALAYEV V N	19	SHTAN'KO A YE	76	SHIRNOVA T N	18	STEPANOV S I	84,108
SHALYAYEV M F	41	SHTAN'KO L A	59	SHMLAKOVSKIY V M	93	STEPANOV V A	21
SHALYGIN A N	37	SHTYKOV V V	109	SHAGOSHCHENKO L P	17	STEPANOV YU A	39,47
SHALYGIN A N	60,61	SHUBERT D	12	SNAGOSHCHENKO L P	50	STERIN KH YE	103
SHAPAREV V YA	1	SHUIBOV A K	24	SNEZHKN YE N	107	STEUDEL H	44
SHAPOSHNIKOVA L A	1	SHUL'MAN M YA	180	SNOPKO V N	96	STIBITZ V	36
SHAPOVAL V Z	20	SHVEDOVA I V	93	SOBOL' A A	88	STONOGA V A	64
SHATALIN I D	76	SHVEDOVA L A	12	SOBOLENKO D N	40	STOICHEV B P	94
SHATALIN S V	24	SHIDRENKO A V	63	SOCHILIN G B	63,66	STOYLOV YU YU	19,104
SHATOKHIN I I	31	SIDORIN A V	108	SOCHILINA I N	92	STRASHNIKOVA M I	3
SHAVERDYAN F M	55	SIDOROVICH V G	75	SOKOLOV A V	113	STRATONOV A S	35
SHCHEGLOV V B	25	SIL'CHUK N D	75	SOKOLOV B K	98	STRATSKEVICH L K	15,102
SHCHEGLOV V I	90	SIL'KINA T G	98	SOKOLOV S I	61	STRIGALEV V YE	36
SHCHERBAKOV YE A	39,53	SIL'NITSKIY A F	88	SOKOLOVA L V	110	STRIGUN V L	6,90
SHCHERBAKOV I A	97	SINKINA N A	74	SOKOLOVA V I	103	STRIZHNEV V S	18
SHCHETININ YE N	29	SIMONENKO T V	87	SOLDATOV A N	9,26	STROTSEVA L P	110
SHCHUKIN G G	63	SINONOV A P	12,48	SOLOGUB V P P	20,21	STRUKOV B A	104
SHEDOVA YE N	86	SINITSA L N	64	SOLOMATIN V S	80	STUDENOV V I	9,18
SHEDOVA N V	6,55	SINITSYN G V	9,89	SOLOMONOV V I	25	STUPAK A P	12
SHENYAVSKIY L A	93	SINYAVSKIY E P	99	SOLOUKHIN R I	22,27	STURMAN B I	102
SHEVEL'KO A N	111	SIRUTKAITIS V	70	SOLOV'YEV A A	91	STYROKY J	35
SHEVERA V S	24	SKACHKOV A N	78	SOLOV'YEV V S	82,93	SUBOCHEV A I	34
SHIBARSHOV L I	111	SKLIZKOV G V	37,38,109	SON E YE	24	SUCHKOV A F	32,84
SHIGORIN D N	98	SKLIZKOV G V	109	SOPIN A I	43	SUDAKOV O A	54
SHIKANOV A YE	83	SKOBELEV I YU	49,109	SOROKA A M	6	SUKHANOV L V	33
SHILO V P	54	SKOROBOGATOV G A	30	SOROKIN YU V	57,69	SUKHAREV M V	54
SHILOV B	47	SKRIPKIN A M	34	SOSNIN A V	81	SUKHAREVA L K	5
SHIPULO G P	53,70	SKRIPKO G A	81	SOSUNOV G N	66,69	SUKHODOL'SKIY A T	45
SHISHAYEV A V	18	SKUYBIN B G	78	SOVIN A I	13	SUKHONIN YE V	113
SHISHKANOV N G	86	SKVORTSOV M N	93	SOZINOV B L	30	SUKHORUKOV A P	41
SHISHKIN I S	108	SKVORTSOV V V	26	SPERANSKIY YU S	79	SULEYMENOV M D	76
SHISHKINA V A	84	SLABKO V V	70				
SHISHKO A M	52	SLADKY P					

SULTANOV M A	186, 107	TIKHONOV YE A	14, 16, 18, 37	TUMAKOV A G	62	VERBOVSKIY V N	5
SUL ZHENKO N P	81	TIMOFEYEV I B	48, 70	TURCHIN V I	73	VERETENNIKOV V V	68
SURIS R A	4	TIMOFEYEV K V	109	TURUNOV A T	5	VEREVAN V I	82
SURKOVA V F	5, 37	TIMOFEYEV V P	7	TURYANITS A I I	76	VERLAN V I	105
SUROVEGIN A L	41	TIMOFEYEV YU P	26, 39, 43	TUZOVA S I	68	VERNIGOR YE M	19
SURCHINSKIY M M	44, 72	TIMOFEYEV G I	82	TYRYSHKIN I S	91	VESELA Z	31
SUSOROVA T A	13	TIMOFEYEV A I	94	TYURIN V S	12	VEYDENBAKH V A	74
SUYAZOV N V	16	TIMOSHECHKIN M I	1	U	114	VEYKO V P	114
SVERCHKOV YU YE	97	TIMOSHIN YU V	94	UDACHIN YU M	47	VIDMONT N A	100
SVESHNIKOVA YE B	104	TIISHCHENKO V M	27	UDARTSEV A M	92	VIGDOROVICH YE N	100
SVIRIDENKOV E A	84, 92	TIISHCHENKO A A	84	UDOYEV YU P	36	VINETSKIY V L	53, 54
SVIRKUNOV P N	68	TITOV R A	97	UGLOV A A	106, 108	VINOGRADOVA A A	76
SVISTUNOV A P	6	TITOVA YE YE	39	UL' MASBAYEV B SH	86	VINGRADOVA A A	49, 109
SYBEVA M L	101	TKACHENKO V M	108	UL' YANCHENKO A A	39	VISHCHAKAKAS Y	9
SYCHEV A A	43	TKACHUK A M	47	UMREYKO D S	103	VITUKHNOVSKIY A G	76
SYCHUGOV V A	50, 53	TKESHELASHVILI G I	78	UMRIKHIN V A	94	VITUKHNOVSKIY A G	105
SYSKOVA E M	6	TLUSTYAK B T	66	URYSOHN B V	81	VLADIMIROV A S	21
SZYDLAK J	38	TOLKACHEV V A	49	USHAKOV V ZH	92	VLASOV A N	76
T		TOLSTOROZHEV G B	11	USMANOV P D	52	VLASOVA L G	3
TADZHIYEV A D	111	TOLSTOY M N	5	USTINOV N D	49	VOINOVA L G	73
TAGIROV V I	96	TOMASHEVICH YU V	1, 39	UZHEGOV V N	62	VOLKOV V I	73
TAKIBAYEV ZH S	22	TOMBAK M A	89	UZHINOV B M	14	VOLKOV V V	72
TAKLAYA A A	68, 71	TOMILIN M G	100	V	94	VOLKOVITSKIY O A	68, 69
TAKOBI YU A	22	TOMIN V I	18	VALLAS S K	94	VOLOSOV V D	3
TALANOV V I	82	TOMIN V U	47	VALOV P M	79, 99	VOLOVIK N V	95
TALENSKIY O N	2	TOMSON V V	94	VANDYUKOV YE A	103	VOLYNKIN V M	9
TANIN L V	40, 92, 110	TOMULESCU R	35	VANYURIKHIN A I	94	VORONIN S P	39
TANTSUYURA L YA	75	TOROPOV A K	79	VARGANOVA L F	111	VORONIN YE M	87
TARABROV V V	83	TOT B	105	VARLANOV YU V	32	VORON'KO YU K	97
TARAKANOV V I	89	TOTOMTSEVA L A	80	VARTAPETOV S K	95	VORONOV V V	105
TARASENKO N V	40	TREGUBOV S I	111	VASHCHUK V I	70	VOROSHILOV YU V	91
TARASENKO V F	25, 27, 28	TRESHCHALOV A B	105	VASHUK V I	18, 19	VOROZHEYKINA L F	76
TARASHCHENKO D T	73	TRET'YAKOV D N	3	VASILENKO G I	114	VOYEYKOVA YE D	74
TARASOV V M	4, 5	TRIBEL'SKIY M I	107	VASILENKO L S	18, 78	VOYTOVICH A P	83
TARTAKOVSKIY I I	100	TRIVOZHENKO B YE	67	VASIL'YEV L A	30, 95	VOYTSEKHOVSKAYA O K	58
TARTAKOVSKIY V A	65	TROSHIN B I	5, 20, 24	VASIL'YEV V P	82	VOYTSEKHOVSKIY A V	69
TATARKSKIY V I	71	TROSHIN V I	21	VASINA M I	3	W	1
TATIKOLOV A S	12	TROSHKIN I A	29	VASYUTINSKIY O S	34	MALIGORA C	2
TELESHEVSKIY V I	104	TRUBACHEVA E A	56	VAYNSHTEYN L A	49	WEIDNER F	102
TEL'NOV V A	23	TRUBACHEYEV E A	23	VAYTKUS Y	76	WERNICKE G	95
TEREKHIN D K	34	TSEKHOMSKIY V A	98	VECKER R	2	WIKTOR B	80
TERENT'YEV YU I	71	TSENDIN L D	24	VELCULESCU V G	35	WOLF L	45, 95
TESAR V	36	TSUKERMAN S V	17	VENITSKIY V N	105	Y	
TESELKIN V V	21	TSUKERMAN V A	29	VENKOV V	73		
TESLENKO A I	82	TSUPRUN V L	94				
THORWITH G	35	TSURKAN A YE	105				
TIKHOMIROV S A	11	TSYVK R SH	69				
TIKHOMIROV O YU	48	TSYBIN A S	83, 110				
		TSYPIN M I	35				
		TUCHIN V V	20, 26, 82				

YAKOVENKO A A	105	ZABORTSEVA T A	21	ZOLOTOV YE M	39,53
YAKOVENKO V A	10	ZADDE G O	69	ZOLOTOVSKIY O A	112
YAKOVLENKO S I	50,111	ZAGORODNYUK V T	95	ZUBAREV I G	5,19
YAKOVLEV N YE	62	ZAKHARCHENKO S V	57,69	ZUBOV V A	72
YAKOVLEV P P	36	ZAKHARENKO YU G	20	ZUBRITSKIY E V	56
YAKOVLEV V A	69	ZAKHAR YASH V F	80	ZUYEV V S	19
YAKUBETS KAYA N I	94	ZALESSKAYA G A	99	ZUYEV V YE	60,62,69,114
YAKUBOVICH S D	6,55	ZAPESOCHNYI I P	24	ZUYKOVA E H	73
YAKUBOVICH YE I	113	ZARUDNYI A A	16	ZVEREV G M	36
YAKUSHKIN YE D	104	ZASAVITSKIY I I	3	ZVEREV V A	96
YAKUSHKINA L I	61	ZASLAVSKAYA V R	96	ZVEREV V V	51
YAMSHCHIKOV V A	22	ZASLAVSKIY G M	50	ZVORYKIN V D	45
YANSON M L	78	ZASTROGIN YU F	85	ZYBIN A V	100
YARASHYUNAS K	76	ZAVADOVSKAYA YE K	108		
YARMOSH N A	76	ZAVESTOVSKAYA I N	50		
YAROSHENKO O I	17	ZAVOROTNYI V U	71		
YAROSHETSKIY I D	99	ZAYATS A YU	24		
YASEVICHYUTE YA	101	ZAYDEL A N	112		
YASHNIKOV V P	100	ZAYTSEV G A	96		
YATSENKO A S	24,99	ZEL DOVICH B YA	44		
YEGOROV B V	3	ZELENSKIY D F	29		
YEGOROV V G	33	ZENSKOV K I	26		
YEGOROV YU P	83	ZEYGER S G	51		
YEGOROV-KUZ'MIN A S	37	ZEYLIKOVICH I S	84		
YELAGIN A N	34	ZEYNALLY A KH	96		
YELESIN V F	97	ZHABOTINSKIY M YE	97		
YELISEYENKOV V I	14	ZHBATKOV R G	52,78		
YELISEYEV P G	50	ZHEKOV V I	1		
YELISEYEV S I	33	ZHELTOV G P	59		
YEMEL'YANOV V I	44,50,105	ZHESTOKOVA T P	78		
YENGOYAN T M	87	ZHEVANDROV N D	105		
YEPIFANOV A S	108	ZHIDKOV N V	106		
YEREMENKO A S	9,11	ZHIGANOV V N	74		
YEREMENKO V V	105	ZHITKEVICH A L	52		
YERMAKOV A A	72	ZHIVOPISTSEV V S	112		
YERMOLENKO G I	46	ZHIVOTOV V K	76		
YEROKHIN A I	95	ZHIVOTOV V I	32		
YERTANOVA O N	76	ZHNIKRU P A I	90		
YEVDOKIMOV V A	4	ZHUGAN YU YU	69		
YEVDOKIMOV O B	29	ZHUKOV A F	75		
YUKOV YE A	109	ZHUKOV V A	26		
YURSHIN V YA	18	ZHUKOV V V	26		
YUSHKO B	29	ZHUKOVSKIY V V	85		
YUSHKO K B	90	ZHUPAN YU YU	83		
		ZHURAVLEV A G	9		
		ZHURAVLEV G I	86		
		ZIELINSKI A	27		
		ZIMIN L G	105		
		ZLENKO A A	53		
		ZLENKO YU A	96		
ZABELLO YE I	18,19	ZNAMENSKIY V B	26		
ZABIYAKIN YU YE	19				