

AD-A070 763

DEFENSE INTELLIGENCE AGENCY WASHINGTON DC
BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, NUMBER 29, MAY-JUNE --ETC(U)
AUG 78

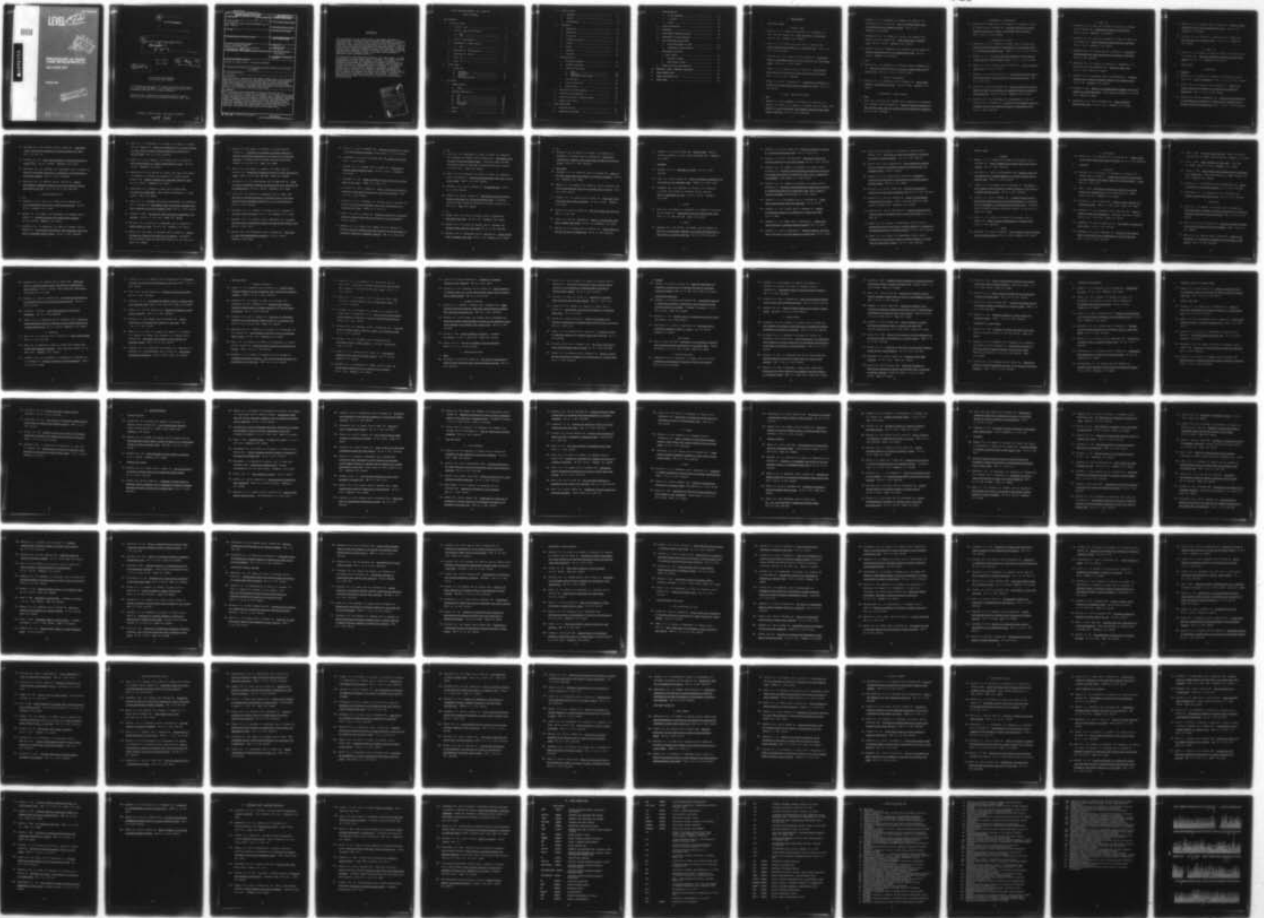
F/G 20/5

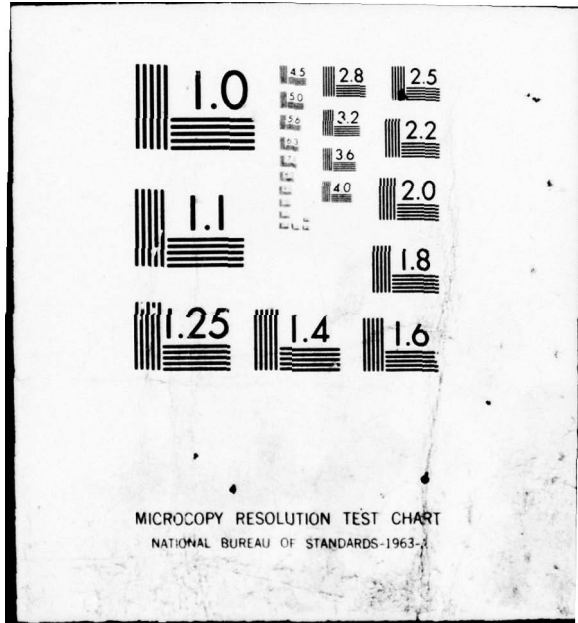
UNCLASSIFIED

DIA-DST-1740Z-003-78

NI

1 of 2
AD
A070763





LEVEL

12

PII

DA070763

DDC
REF ID: A66174
JUL 3 1979
[Signature]

**BIBLIOGRAPHY OF SOVIET
LASER DEVELOPMENTS (U)**

MAY-JUNE 1977

AUGUST 1978

This document has been approved
for public release and sale; its
distribution is unlimited.

79 07 02 026

14

DIA-DST-17402-003-78

6

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS,

Number 29,

MAY - JUNE 1977,

Date of Report

May 12, 1978

11

Aug 78

12

105 p.

Vice Director for Production
Defense Intelligence Agency

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

Comments should be addressed to the Defense Intelligence Agency, Directorate for Scientific and Technical Intelligence, ATTN: DT-1A.

Approved for public release; distribution unlimited

107 300

set

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM	
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, No. 29 MAY - JUNE 1977		5. TYPE OF REPORT & PERIOD COVERED	
7. AUTHOR(s)		6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s)	
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Intelligence Agency Directorate for Scientific and Technical Intelligence, ATTN: DT-1A		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE May 12, 1978	
		13. NUMBER OF PAGES 97	
		15. SECURITY CLASS. (of this report) UNCLASSIFIED	
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited			
17. Distribution Statement (of the abstract entered in Block 20, if different from report)			
18. Supplementary Notes			
19. KEY WORDS Solid State Lasers, Liquid Lasers, Gas Lasers, Chemical Lasers, Laser Components, Nonlinear optics, Spectroscopy of Laser Materials, Ultrashort Pulse Generation, Gamma Lasers, Laser Theory, Laser Biological Effects, Laser Communications, Laser Beam Propagation, Laser Computer Technology, Holography, Laser Chemical Effects, Laser Parameters, Laser Measurement Applications, Laser-Excited Optical Effects, Laser Beam-Target Interaction, Laser Plasma			
20. ABSTRACT This is the Soviet Laser Bibliography for May-June 1977 and is No. 29 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.			

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1977, 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.

Accession For	
NTIS	GI&I
DDC	TAB
Unannounced	
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or special

TABLE OF CONTENTS

I. BASIC RESEARCH

A. Solid State Lasers

1.	Crystal: Ruby	1
2.	Crystal: Rare-Earth Activated	
a.	Nd ³⁺	1
b.	Ho ³⁺	2
3.	Crystal: Miscellaneous	2
4.	Semiconductor: Simple Junction	
a.	PbTe	2
5.	Semiconductor: Heterojunction	3
6.	Semiconductor: Theory	3
7.	Glass: Nd	4
8.	Glass: Yb	5

B. Liquid Lasers

1.	Organic Dyes	
a.	Rhodamine	5
b.	Phthalimide	6
c.	Xanthene	6
d.	Miscellaneous Dyes	6

C. Gas Lasers

1.	Simple Mixtures	
a.	He-Ne	7
2.	Molecular Beam and Ion	
a.	CO ₂	8
b.	CO	12
c.	N ₂	12
d.	I ₂	13
e.	Metal Vapor	13
f.	Gasdynamic	14
3.	Excimer	14
4.	Theory	14

D.	Chemical Lasers	
1.	$F_2+H_2(D_2)$	17
2.	SF_6+H_2	17
3.	Miscellaneous	18
E.	Components	
1.	Resonators	18
2.	Pump Sources	19
3.	Deflectors	20
4.	Diffraction Gratings	21
5.	Filters	21
6.	Mirrors	21
7.	Detectors	21
8.	Modulators	22
F.	Nonlinear Optics	
1.	Frequency Conversion	24
2.	Parametric Processes	26
3.	Stimulated Scattering	
a.	Raman	26
b.	Rayleigh	28
c.	Miscellaneous Scattering	28
4.	Self-focusing	28
5.	Acoustic Interaction	28
6.	General Theory	29
G.	Spectroscopy of Laser Materials	31
H.	Ultrashort Pulse Generation	32
J.	Theoretical Aspects of Advanced Lasers	33
K.	General Laser Theory	33
II.	LASER APPLICATIONS	
A.	Biological Effects	37
B.	Communications Systems	37

C.	Beam Propagation	
1.	In the Atmosphere	40
2.	In Liquids	42
3.	Theory	42
D.	Computer Technology	43
E.	Holography	45
F.	Laser-Induced Chemical Reactions	52
G.	Measurement of Laser Parameters	55
H.	Laser Measurement Applications	
1.	Direct Measurement by Laser	56
2.	Laser-Excited Optical Effects	65
J.	Beam-Target Interaction	
1.	Metal Targets	70
2.	Dielectric Targets	72
3.	Miscellaneous Studies	73
K.	Plasma Generation and Diagnostics	74
III.	MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS	80
IV.	SOURCE ABBREVIATIONS	83
V.	AUTHOR AFFILIATIONS LIST	86
VI.	AUTHOR INDEX	89

I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Danilov, S.V., L.S. Dovger, Ye.A. Korolev, D.S. Prilezhayev, B.M. Sedov, and V.Kh. Yagmurov (0). Single mode laser for holography. IN: Sb 1, 369. (RZhRadiot, 6/77, 6Ye107)
2. Gulev, V.S., V.S. Pivtsov, K.G. Folin, and A.I. Chernyshev (0). Spectral-kinetic characteristics for a ruby sweep laser. ZhPS, v. 26, no. 6, 1977, 1012-1016.
3. Korniyenko, L.S., N.V. Kravtsov, and B.G. Skuybin (2). Spontaneous phasing of longitudinal modes in a solid state laser in a free-running regime. ZhTF P, no. 12, 1977, 581-583.
4. Lebedev, V.I., V.A. Yurevich, and A.I. Yasen' (0). High-frequency self-modulation of radiation in a laser with a nonstable resonator. ZhPS, v. 26, no. 6, 1977, 1000-1006.
5. Mikhnov, S.A., and V.P. Khyuppenen (3). Optimizing the parameters of a selector for a tunable single-frequency single-pulse laser. PTE, no. 3, 1977, 181-183.

2. Crystal: Rare-Earth Activated

- a. Nd³⁺
6. Abakumov, G.A., Kh.S. Bagdasarov, V.V. Vetrov, S.A. Vorob'yev, V.P. Zakharov, V.F. Pikel'ni, A.P. Simonov, V.V. Fadeyev, and Ye.A. Fedorov (92). YAG:Nd laser and its high-power fourth harmonic generation under pulsed periodic conditions. KE, no. 5, 1977, 1152-1153.

7. Balashov, I.F., V.A. Berenberg, B.A. Yermakov, P.V. Klevtsov, V.V. Lyubchenko, and A.A. Pavlyuk (0). Study of Q-switched lasers using new neodymium-activated tungstate crystals. IN: Sb 1, 18. (RZhRadiot, 6/77, 6Ye118)
8. Galaktionova, N.M., V.V. Gershun, V.A. Miller, A.M. Ponomarev, M.M. Khaleyev, and G.Ya. Shanichev (0). Stable single-mode c-w YAG:Nd³⁺ laser. IN: Sb 1, 372-374. (RZhRadiot, 6/77, 6Ye111)
9. Golyayev, Yu.D., A.V. Grushetskiy, K.N. Yevtyukhov, and L.N. Kaptsov (0). Frequency stabilization in a c-w neodymium garnet laser. IN: Sb 1, 170-171. (RZhRadiot, 6/77, 6Ye158)
- b. Ho³⁺
10. Butayeva, T.I., A.A. Kaminskiy, A.G. Petrosyan, and Kh.S. Bagdasarov (59, 13). Stimulated emission at 300 K in Lu₃Al₅O₁₂ crystals doped with Ho³⁺ and Er³⁺ ions. DAN Arm, v. 63, no. 4, 1976, 232-238.

3. Crystal: Miscellaneous

11. Naboykin, Yu.V., L.A. Ogurtsova, and A.P. Podgornyy (0). Doped organic crystals: active media for lasers. IN: Sb 1, 89-90. (RZhRadiot, 6/77, 6Ye121)

4. Semiconductor: Simple Junction

- a. PbTe
12. Anzin, V.B., A.D. Britov, M.V. Glushkov, Ye.S. Itskevich, G.A. Kalyuzhnaya, Yu.V. Kosichkin, and A.M. Shirokov (1). Tuning the emission wavelength in PbTe injection lasers under the combined action of pressure and temperature. KE, no. 6, 1977, 1390-1392.

5. Semiconductor: Heterojunction

13. Bakhert, Kh-Yu. (Bachert, H-J.), A.P. Bogatov, P.G. Yeliseyev, A. Kler, M.A. Man'ko, and V.P. Strakhov (0). Injection laser with an external dispersion resonator as a source of narrowband tunable radiation. ZhPS, v. 26, no. 6, 1977, 988-992.

6. Semiconductor: Theory

14. Aleksandrov, A.S., V.F. Yelesin, A.N. Kremlev, and V.P. Yakovlev (16). Electron excitation spectrum of a semiconductor in the resonance field of a standing electromagnetic wave. ZhETF, v. 72, no. 5, 1977, 1912-1925.
15. Areshev, I.P. (4). Two-photon interzone absorption of laser radiation in semiconductors aided by impurity levels. FTP, no. 5, 1977, 962-964.
16. Bogatov, A.P., P.G. Yeliseyev, and B.N. Sverdlov (1). Study of injection lasers. Part 2. IN: Tr 1, 75-115.
17. Logginov, A.S., and V.Ye. Solov'yev (2). Calculating the distribution of the concentration of current carriers in strip injection lasers. VMU, no. 2, 1977, 76-78.
18. Prodan, V.D., and Ya.A. Rozneritsa (0). Optical transitions in semiconductor thin films in the presence of a quantum sizing effect enhanced by minute impurities. IN: Sb 2, 154-164. (RZhRadiot, 5/77, 5Yel58)
19. Voytovich, A.P., V.P. Gribkovskiy, A.A. Pavlyushchik, G.T. Pak, G.I. Ryabtsev, and I.V. Yashumov (3). The effect of birefringence, induced by a magnetic field, on the emission spectrum of a semiconductor laser. KE, no. 5, 1977, 1128-1132.

7. Glass: Nd

20. Alekseyev, V.N., A.A. Mak, Ye.G. Pivinskiy, B.M. Sedov, A.D. Starikov, and A.D. Tsvetkov (0). High-efficiency Nd:glass disk amplifier.
IN: Sb 1, 55-56. (RZhRadiot, 6/77, 6Ye130)
21. Alekseyev, V.N., B.S. Guba, Ye.G. Pivinskiy, O.B. Raba, B.M. Sedov, and A.D. Starikov (0). Study of Nd:glass subnanosecond pulse amplifiers.
IN: Sb 1, 56-57. (RZhRadiot, 6/77, 6Ye125)
22. Bykovskiy, N.Ye., N.V. Pletnev, and Yu.V. Senatskiy (1). Generator of subnanosecond pulses using neodymium glass with periodic Q-switching.
KE, no. 6, 1977, 1301-1306.
23. Dzhibladze, M.I., B.S. Lezhava, L.E. Lazarev, M.I. Sadagashvili, Z.G. Esiashvili, and E.Sh. Tkavashvili (40). Lasing in a fiber laser.
IN: Tr 2, 55-65. (RZhF, 6/77, 6D1167)
24. Gyuzalyan, R.N., D.G. Sarkisyan, and M.L. Ter-Mikaelyan (0). Picosecond coherent optical radiation oscillator tunable in the 350-680 nm range.
IN: Sb 1, 357. (RZhRadiot, 6/77, 6Ye126)
25. Kaczmarek, F. (NS). Effect of a flashlamp-generated magnetic field on the emission of an Nd³⁺ glass laser. Optica applicata [Poland], no. 3-4, 1976, 73-74. (RZhF, 5/77, 5D971)
26. Malashkevich, G.Ye., and V.V. Kuznetsova (0). Compact composite [Nd³⁺ and ruby] laser. IN: Sb 1, 39-40. (RZhRadiot, 6/77, 6Ye-10)

27. Malinin, B.G., L.A. Sitsevaya, and A.I. Stepanov (0). Study of a single-mode Nd:glass laser with an optomechanical switch. IN: Sb 1, 39. (RZhRadiot, 6/77, 6Ye129)
28. Vorob'yev, V.V., A.V. Kil'pio, A.A. Malyutin, and P.P. Pashinin (0). Multipass amplifiers with prism optics. IN: Sb 1, 54. (RZhRadiot, 6/77, 6Ye128)

8. Glass: Yb

29. Galant, Ye.I., V.N. Kalinin, A.A. Mak, A.N. Mironov, Yu.K. Fedorov, and V.A. Fromzel' (0). Lasing in ytterbium and erbium glasses under laser pumping. IN: Sb 1, 7-8. (RZhRadiot, 6/77, 6Ye127)

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

30. Abramov, A.F., S.S. Anufrik, G.R. Ginevich, V.A. Mostovnikov, and A.N. Rubinov (0). Isomers of rhodamine G. ZhPS, v. 26, no. 6, 1977, 1017-1022.
31. Korobov, V.Ye., T.D. Slavnova, and A.K. Chibisov (0). Effect of the spectral composition of pumping on the photoreaction mechanism in rhodamine 6G. ZhPS, v. 26, no. 5, 1977, 841-843.
32. Kunavin, N.I., and R.N. Nurmukhametov (0). Determining the quantum yield of intercombination conversion in a triplet state of rhodamine 6G by a method of sensitized phosphorescence. ZhPS, v. 26, no. 6, 1977, 1120-1122.

b. Phthalimide

33. Pikulik, L.G., A.I. Maksimov, K.I. Rudik, and A.S. Koval'chuk (0).
Study of the spectral dependence of anisotropy of stimulated emission
in solutions of complex molecules. ZhPS, v. 26, no. 5, 1977, 850-855.

c. Xanthene

34. Kunavin, N.I. R.N. Nurmukhametov, and G.T. Khachaturova (0).
Phosphorescence and orbital nature of the triplet state in xanthene dyes.
ZhPS, v. 26, no. 6, 1977, 1023-1027.

d. Miscellaneous Dyes

35. Alekseyev, V.A., V.I. Alekseyeva, L.K. Denisov, B.V. Kalachev, N.A.
Kuznetsova, L.B. Marinina, and A.I. Sopin (0). Lasing in solutions of
Nile blue under flashlamp pumping. ZhPS, v. 26, no. 5, 1977, 955.
36. Andreyev, S.P., S.A. Batikin, and P.I. Myshalov (0). High-power organic
dye laser with a narrow spectral line, operating in the 260-1200 nm range.
IN: Sb 1, 358-359. (RZhRadiot, 6/77, 6Ye95)
37. Dinkchyan, K.V., M.N. Ishkhanyan, M.A. Karapetyan, A.A. Melik-Sarkisyan,
A.A. Nazaryan, and G.B. Torgomyan (37). Lasing in dyes in the 420-470 nm
range with pumping by a UV nitrogen laser. IAN Arm, no. 3, 1977, 229-231.
38. Leupold., S. Mory, R. Koenig, and P. Hoffman (NS). Dye laser. Patent
GDR, no. 120567, issued 12 June 1976. (RZhRadiot, 6/77, 6Ye97)
39. Stefanov, V.Y., and M.N. Nenchev (NS). Dye solvent for a liquid laser.
Author's certificate Bulgaria, no. 17112, issued 30 November 1974.
(RZhRadiot, 5/77, 5Ye94)

40. Vashchuk, V.I., Ye.I. Zabello, N.M. Narovlyanskaya, and Ye.A. Tikhonov (0). Dye lasers with distributed feedback. IN: Sb 1, 87-88. (RZhRadiot, 6/77, 6Ye83)

41. Yaroshenko, O.I., and K.I. Rudik (192). Tensor sensitivity of a dye solution induced by resonant linearly polarized radiation, and radiation of the plane of polarization of light in dye laser amplifiers. ZhTF P, no. 9, 1977, 416-419.

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

42. Bagayev, S.N., L.S. Vasilenko, V.G. Gol'dort, A.K. Dmitriyev, and A.S. Dychkov (10). He-Ne laser at 3.39 μ with an emission linewidth of 7 Hz. KE, no. 5, 1977, 1163-1166.

43. Bismukhametov, K.A., V.I. Bobrik, Yu.D. Kolomnikov, and B.S. Mogil'nitskiy (0). He-Ne lasers as a source of standard wavelengths. IT, no. 6, 1977, 35-37.

44. Domnin, Yu.S., V.M. Tatarenkov, and P.S. Shumyatskiy (140). Synthesis of He-Ne laser frequency at 3.39 μ . KE, no. 5, 1977, 1103-1105.

45. Grimblatov, V.N., and P.M. Gusak (0). Anomalous competition of IR lasing lines in an He-Ne laser. ZhPS, v. 26, no. 5, 1977, 935-937.

46. Korolev, F.A. (2), A.I. Odintsov (2), and Khaled Susu (Syrian). Study of the pole distribution and spatial coherence of superradiance at the 3.39 μ transition in an He-Ne laser. VMU, no. 2, 1977, 43-47.

47. Mel'nikov, N.A., V.Ye. Privalov, and Ya.A. Fofanov (0). Experimental study of He-Ne lasers stabilized by saturated absorption in iodine. Ois, v. 42, 1977, 747.
48. Mel'nikov, N.A. (0). He-Ne laser stabilized by saturated absorption in iodine ($^{127}\text{I}_2$). IN: Sb 1, 360-361. (RZhRadiot, 6/77, 6Ye55)
49. Zabortseva, T.A., A.S. Levchenko, Ye.P. Ostapchenko, and V.A. Stepanov (0). Effect of the resonant properties of a discharge on the fluctuations of He-Ne laser radiation. RiE, no. 6, 1977, 1300-1302.
50. Zmiyevskoy, G.N., I.P. Mazan'ko, and M.V. Sviridov (0). Optical heterodyning of spontaneous emission in an optical amplifier using an He-Ne mixture ($\lambda=3.39\mu$). Ois, v. 42, no. 6, 1977, 1025-1030.

2. Molecular Beam and Ion

- a. CO_2
51. Avanesyan, V.S., A.I. Dutov, Yu.V. Lakhno, and L.N. Malakhov (0). CO_2 electroionization laser with a controlled electron gun. IN: Sb 1, 121-122. (RZhRadiot, 6/77, 6Ye26)
52. Balykin, V.N., A.L. Golger, Yu.R. Kolomiyskiy, V.S. Letokhov, and O.A. Tumanov (0). Infrared gas lasers with resonant optical pumping. IN: Sb 1, 115-116. (RZhRadiot, 6/77, 6Ye24)
53. Batyrbekov, G.A., V.A. Danilychev, I.B. Kovsh, M.P. Mardenov, and M.U. Khasenov (1). Electron-beam controlled CO_2 laser operating in the active zone of a stationary nuclear reactor. KE, no. 5, 1977, 1166-1168.

54. Boyko, V.A., V.A. Danilychev, V.D. Zvorykin, T.G. Ivanova, I.V. Kholin, and A.Yu. Chugunov (1). Study of the plasma mirror of an electroionizing CO₂ laser within the range of heating radiation flux densities of 10^{11} - 10^{12} W/cm². KE, no. 6, 1977, 1307-1312.
55. Bychkov, Yu.I., Yu.A. Kurbatov, V.M. Orlovskiy, and V.V. Osipov (0). Power characteristics of a tunable high-pressure CO₂ laser. IN: Sb 1, 119-120. (RZhRadiot, 6/77, 6Ye15)
56. Datskevich, N.P., Ye.K. Karlova, N.V. Karlov, Yu.B. Konev, N.N. Kononov, I.V. Kochetov, G.P. Kuz'min, S.M. Nikiforov, V.G. Pevgov, and A.M. Prokhorov (0). Unstable resonator for a high-power pulsed CO₂ laser. IN: Sb 1, 118-119. (RZhRadiot, 6/77, 6Ye27)
57. Dragulinescu, D., C. Grigoriu, A. Nitoi, and I.M. Popescu (NS). A 23 joule, CO₂ pulsed laser. Revue roumaine de physique, no. 7, 1976, 665-669. (RZhF, 5/77, 5D1011)
58. Ivanov, R.S., V.T. Karpukhin, N.M. Korolev, M.M. Malikov, A.V. Nedospasov, and G.I. Stotskiy (74). Experimental study of an electric discharge laser with a supersonic gas flow in a magnetic field. TVT, no. 3, 1977, 635-642.
59. Jazwinski, M. (NS). Fast-flow CO₂ laser with electric excitation in the resonator. BWAT, no. 2, 1976, 49-56. (RZhF, 5/77, 5D1002)
60. Kal'vina, I.N., V.M. Kas'yan, V.F. Moskalenko, and V.V. Sinyakov (0). Tunable pulsed CO₂ laser. IN: Sb 1, 163. (RZhRadiot, 6/77, 6Ye17)
61. Karlov, N.V., Yu.B. Konev, I.V. Kochetov, and V.G. Pevgov (1). Kinetic processes in a system of low levels in a CO₂ molecule. Fizicheskiy institut AN SSSR. Kvantovaya radiofizika. Preprint, no. 183, 1976, 21 p. (RZhF, 5/77, 5D1000)

62. Karlov, N.V., Yu.B. Konev, I.V. Kochetov, V.G. Pevgov, and A.M. Prokhorov (1). Possibility of obtaining a population inversion at $10^1 0-01^1 0$ and $02^0-01^1 0$ transitions of a CO_2 molecule in a pulsed gas discharge. Fizicheskiy institut AN SSSR. Kvantovaya radiofizika. Preprint, no. 184, 1977, 8 p. (RZhF, 5/77, 5D998)
63. Karlov, N.V., Yu.B. Konev, I.V. Kochetov, V.G. Pevgov, and A.M. Prokhorov (0). Possibility of lasing at 16 and 14 μ in CO_2 gas discharge lasers. ZhTF P, no. 23, 1976, 1062-1065. (RZhF, 6/77, 6D1198)
64. Kiselevskiy, L.I., D.A. Solov'yanchik, and A.M. Makarevich (0). Pulsed CO_2 laser at atmospheric pressure with preionization by UV radiation from an extended source. IN: Sb 1, 122-124. (RZhRadiot, 6/77, 6Ye29)
65. Konev, Yu.B., I.V. Kochetov, V.S. Marchenko, and V.G. Pevgov (118). The effect of resonant excitation of rotational levels on the energy balance in the gas discharge plasma in N_2 , CO, CO_2 and He mixtures. KE, no. 6, 1977, 1359-1361.
66. Kuntsevich, B.F., B.I. Stepanov, S.A. Trushin, and V.V. Churakov (0). CO_2 laser in the 16 μ region. IN: Sb 1, 135. (RZhRadiot, 6/77, 6Ye18)
67. Mazurenko, Yu.T., Yu.A. Rubinov, and P.A. Shakhverdov (7). CO_2 photoionization laser at atmospheric pressure with high specific energy output. OMP, no. 5, 1977, 32-34.
68. Mirzayev, Ag.T., M.M. Mirinoyatov, and V.A. Stepanov (0). Small-scale CO_2 laser with high-frequency excitation. IN: Sb 1, 366-367. (RZhRadiot, 6/77, 6Ye22)

69. Osipov, A.P., and A.T. Rakhimov (98). Ionization instability in a plasma of non-selfsustaining discharges. Fizika plazmy, no. 3, 1977, 644-651.
70. Ponomarenko, A.G., and V.N. Tishchenko (193). CO₂ amplifier efficiency. KE, no. 5, 1977, 970-975.
71. Stepanov, B.I., S.A. Trushin, and V.V. Churakov (0). High-pressure optically-pumped molecular lasers. IN: Sb 1, 114-115. (RZhRadiot, 6/77, 6Ye21)
72. Tishchenko, V.N. (0). Optimal conditions for generating short and long pulses in CO₂ lasers. ZhPMTF, no. 3, 1977, 9-15.
73. Vol'skaya, S.P., and V.I. Pugin (0). Effect of xenon on the electrical parameters of the positive column of CO₂ with helium and xenon. ZhPS, v. 26, no. 6, 1977, 979-982.
74. Vorontsov, S.S., A.I. Ivanchenko, R.I. Soloukhin, and A.A. Shepelenko (0). Effect of the active gas replacement rate on the characteristics of a closed-cycle CO₂ laser. ZhPMTF, no. 3, 1977, 7-9.
75. Yegorov, V.B., and G.N. Sayapin (0). Population inversion at vibrational levels of a molecule after direct shock waves in CO₂-N₂-H₂O mixtures. IN: Sb 3, 123-127.
76. Zakharov, A.S., A.A. Zelenov, Ye.P. Semenov, and Ye.M. Yudintsev (7). Pulsed CO₂ electric discharge laser with ionization of the gas mixture by ultraviolet radiation at atmospheric pressure. OMP, no. 6, 1977, 29-31.

b. CO

77. Basov, N.G., V.A. Danilychev, A.A. Ionin, I.B. Kovsh, V.S. Kazakevich, N.L. Poletayev, V.A. Sobolev, and M.U. Khasenov (1). Experimental study of pulsed CO electroionization lasers. Fizicheskiy institut AN SSSR. Laboratoriya kvantovoy radiofiziki. Kvantovaya radiofizika. Preprint, no. 6, 1977, 46 p. (RZhF, 6/77, 6D1194)
78. Basov, N.G., V.A. Danilychev, A.A. Ionin, I.B. Kovsh, V.S. Kazakevich, and N.L. Poletayev (1). Cooled CO electroionization laser with a 5-liter active volume. ZhTF P, no. 9, 1977, 385-389.
79. Dubovskiy, P.Ye., and E.N. Lotkova (1). CO waveguide laser. ZhTF P, no. 12, 1977, 540-542.
80. Lobanov, A.N., and A.F. Suchkov (1). Distribution function and energy balance of electrons in a CO electroionization laser. Fizicheskiy institut AN SSSR. Laboratoriya kvantovoy radiofiziki. Preprint, no. 8, 1977, 17 p. (RZhF, 6/77, 6D1195)

c. N₂

81. Bychkov, Yu.I., V.F. Losev, G.A. Mesyats, and V.F. Tarasenko (0). High-power N₂+Ar laser. IN: Sb 1, 121. (RZhRadiot, 6/77, 6Ye42)
82. Bychkov, Yu.I., V.F. Losev, G.A. Mesyats, and V.F. Tarasenko (78). Lasing at three lines in a N₂+Ar laser. KE, no. 6, 1977, 1385-1387.
83. Kalachev, A.N., V.F. Moskalenko, and S.V. Pechurina (0). Pulsed nitrogen laser for pumping a dye laser. IN: Sb 1, 359. (RZhRadiot, 6/77, 6Ye30)

d. I₂

84. Belousova, I.M., B.D. Bobrov, V.A. Burtsev, A.S. Grenishin, V.A. Dubyanskiy, V.M. Kiselev, and A.B. Produvnov (0). Iodine laser controlled by a magnetic field, using current breakers in the control circuit. ZhTF, no. 5, 1977, 1033-1035.

e. Metal Vapor

85. Abrosimov, G.V., V.V. Vasil'tsov, and V.D. Pis'mennyy (0). Study of a CuI laser using copper halide vapor in a transverse discharge. IN: Sb 1, 113. (RZhRadiot, 6/77, 6Ye49)
86. Bokhan, P.A., V.M. Klimkin, V.Ye. Prokop'yev, and S.S. Monastirev (78). He-Eu ion gas-discharge laser with an average power of 2 watts. ZhTF P, no. 9, 1977, 410-413.
87. Burmakin, V.A., V.I. Bylkin, and N.A. Portnov (0). Copper vapor laser system with high radiation coherence. IN: Sb 1, 112-113. (RZhRadiot, 6/77, 6Ye48)
88. Dyatlov, M.K., and V.G. Kas'yan (0). The LG-70 cadmium vapor gas laser. PTE, no. 3, 1977, 268.
89. Isayev, A.A., and G.Yu. Lemmerman (0). Study of a pulsed copper vapor laser at higher power levels. IN: Sb 1, 85. (RZhRadiot, 6/77, 6Ye50)
90. Markova, S.V., G.G. Petrash, and V.M. Cherezov (1). Pulsed emission at the 472.2 nm line of a bismuth atom. KE, no. 5, 1977, 1154-1155.

91. Stefanov, V.Y., and M.D. Petrova (NS). He-Ne-Cd laser. Author's certificate Bulgaria, no. 17241, issued 29 November 1974. (RZhRadiot, 5/77, 5Ye52)

f. Gasdynamic

92. Konyukhov, V.K. (1). Gasdynamic CO₂ lasers. KE, no. 5, 1977, 1014-1022.

93. Losev, S.A., and V.N. Makarov (0). Effect of heating the supersonic flow on the gain in a CO₂ gasdynamic laser. ZhPMTF, no. 3, 1977, 15-18.

94. Vyskubenko, B.A., Ye.T. Demenyuk, G.A. Kirillov, Yu.V. Kolobyenin, S.B. Korner, V.M. Linnik, N.A. Nitochkin, and V.D. Urlin (0). Study of a gasdynamic CO₂ laser. IN: Sb 1, 124-125. (RZhRadiot, 6/77, 6Ye71)

3. Excimer

95. Basov, N.G., A.N. Brunin, V.A. Danilychev, V.A. Dolgikh, A.G. Degtyarev, and O.M. Kerimov (0). High-pressure ultraviolet XeF molecular laser. ZhTF P, no. 23, 1976, 1057-1062. (RZhF, 6/77, 6D1212)

4. Theory

96. Bogdanova, M.V., T.M. Il'inova, A.O. Markano, and G.N. Medvedev (2). The effect of vibrational relaxation on the energy characteristics of a laser pulse in a molecular amplifier. KE, no. 6, 1977, 1243-1248.

97. Brodovich, N.A., and N.N. Rozanov (0). Threshold conditions for lasing in a frequency-modulated gas laser. OIS, v. 42, 1977, 763.
98. Galechyan, G.A., and S.I. Petrosyan (59). Experimental study of the stability conditions in a gas flow discharge. KE, no. 5, 1977, 1143-1144.
99. Generalov, N.A., V.P. Zimakov, V.D. Kosynkin, Yu.P. Rayzer, and D.I. Roytenburg (17). Stationary non-selfsustaining discharge with ionization by electrode-less pulses in a closed-cycle laser. Part 1. Construction and experiment. Fizika plazmy, no. 3, 1977, 626-633.
100. Generalov, N.A., V.P. Zimakov, V.D. Kosynkin, Yu.P. Rayzer, and D.I. Roytenburg (17). Stationary non-selfsustaining discharge with ionization by electrode-less pulses in a closed-cycle laser. Part 2. Theory of capacitive discharge. Fizika plazmy, no. 3, 1977, 634-643.
101. Gudzenko, L.I., V.V. Yevstigneyev, and S.I. Yakovlenko (1). Plasma lasers using atom and atomic ion transitions. IN: Tr 3, 17-37.
102. Gudzenko, L.I., Yu.I. Syts'ko, and S.I. Yakovlenko (1). Methods of forming and analysis of the kinetics of a supercooled plasma. IN: Tr 3, 38-60.
103. Gudzenko, L.I., I.S. Lakoba, and S.I. Yakovlenko (1). Plasma lasers using transitions of dispersed diatomic molecules. IN: Tr 3, 61-89.
104. Gudzenko, L.I., and V.S. Marchenko (1). Chemical purging of the ground state of an atom in the active medium of a plasma laser. IN: Tr 3, 90-98.

105. Isayev, A.A., M.A. Kazaryan, G.G. Petrash, S.G. Rautian, and A.M. Shalagin (1,72). The process of output beam shaping in a pulsed gas laser with an unstable resonator. KE, no. 6, 1977, 1325-1335.
106. Kireyev, A.Yu., and A.D. Nadezhin (0). Photorecombination mechanism for the occurrence of population inversion at electron levels of a nitrogen molecule. IN: Sb 3, 119-122.
107. Lyakhov, G.A., Yu.P. Svirko, and N.V. Suyazov (2). Threshold of excitation and output power of a gas laser with two-photon spatial-periodic pumping. VMU, no. 2, 1977, 78-80.
108. Mel'nikov, L.A., and V.V. Tuchin (99). Technical fluctuations of radiation in a laser with an absorption cell. KE, no. 5, 1977, 1117-1121.
109. Timofeyev, B.A., and Yu.M. Yakovlev (0). Method of processing gas discharge tubes for lasers. Author's certificate USSR, no. 416797, issued 13 September 1976. (RZhRadiot, 5/77, 5Ye300)
110. Voytovich, A.P., and S.V. Panteleyev (0). Frequency selection in gas lasers by means of the Faraday effect in the active medium. Ois, v. 42, 1977, 681.
111. Zhukov, V.V., Ye.L. Latysh, V.S. Mikhalevskiy, and M.F. Sem (41). Recombination lasers using vapors of chemical elements. I. Principles for obtaining generation in a recombination mode. KE, no. 6, 1977, 1249-1256.
112. Zhukov, V.V., Ye.L. Latysh, V.S. Mikhalevskiy, and M.F. Sem (41). Recombination lasers based on vapors of chemical elements. II. Lasing using ion transitions of metals. KE, no. 6, 1977, 1257-1267.

D. CHEMICAL LASERS

1. $F_2 + H_2 (D_2)$

113. Bashkin, A.S., V.I. Igoshin, Yu.S. Leonov, A.N. Orayevskiy, and O.Ye. Porodinkov (1). Study of chemical laser emission based on HF molecule overtone. KE, no. 5, 1977, 1112-1114.
114. Golovichev, V.I., and N.G. Preobrazhenskiy (193). Numerical analysis of the properties of a saturated medium of a turbulent diffusion-type HF chemical laser. FGIV, no. 3, 1977, 366-378.
115. Igoshin, V.I., V.Yu. Nikitin, and A.N. Orayevskiy (1). The effect of basic elements on the efficiency of coherent radiation in the process of a hydrogen-fluorine reaction. KE, no. 6, 1977, 1282-1295.
116. Stepanov, A.A., and V.A. Shcheglov (1). A sequential method based on Navier-Stokes equations (plane and cylindrical geometry of a jet-nozzle unit) for designing a c-w diffusion-type HF chemical laser. Fizicheskiy institut AN SSSR. Kvantovaya radiofizika. Preprint, no. 182, 1976, 53 p. (RZhF, 5/77, 5D1012)
117. Zikov, L.I., G.A. Kirillov, S.B. Kormer, V.D. Nikolayev, and S.A. Sukharev (0). Study of optical nonuniformities in chemical lasers. KE, no. 6, 1977, 1336-1340.

2. $SF_6 + H_2$

118. Zapol'skiy, A.F., and K.B. Yushko (0). $SF_6 + H_2$ chemical laser with pumping from an inductive storage. IN: Sb 1, 125-126. (RZhRadiot, 6/77, 6Ye77)

3. Miscellaneous

119. Bashkin, A.S., N.L. Kupriyanov, and A.N. Orayevskiy (1). Chemical laser in the visible range using oxidation reactions. KE, no. 5, 1977, 1063-1070.

E. COMPONENTS

1. Resonators

120. Abrosimov, G.V., F.A. Korolev, P.V. Korolenko, A.I. Odintsov, N.E. Sarkarov, and V.F. Sharkov (2). Comparative analysis of the efficiency of various methods for an energy scheme from the active medium of a laser. VMU, no. 1, 1977, 32-39.
121. Blaha, V. (NS). Mechanism for adjusting the mirrors in an optical resonator in a discharge tube. Patent Czechoslovakia, no. 158107, issued 15 May 1975. (RZhRadiot, 6/77, 6Ye182)
122. Czechowicz, R., and Z. Puzewicz (NS). Unstable optical resonator with a lenticular medium. BWAT, no. 2, 1976, 39-48. (RZhF, 5/77, 5D956)
123. Gerasimova, I.A., N.N. Kvachenok, and T.M. Nesterenko (87). Lasing in media with square-law inhomogeneity. Belorusskiy universitet. Vestnik, seriya I, no. 1, 1977, 30-34. (RZhF, 6/77, 6D1145)
124. Likhanskiy, V.V., and A.P. Napartovich (0). The stability of single-mode laser action. KE, no. 6, 1977, 1353-1356.
125. Nesterenko, T.M., and A.P. Khapalyuk (0). Structure of the radiation field of active media with an inhomogeneity of the fine lens type. ZhPS, v. 26, no. 6, 1977, 1104-1111.

126. Petru, F. (NS). Device for a gas laser tube. Author's certificate Czechoslovakia, no. 158105, issued 15 May 1975. (RZhRadiot, 6/77, 6Ye65)
127. Polze, S. (NS). Tunable resonator for dye lasers. Patent GDR, no. 120568, issued 12 June 1976. (RZhRadiot, 5/77, 5Ye183)
128. Stibitz, V. (NS). Laser resonator with safeguards against misalignment of a coherent beam. Patent Czechoslovakia, no. 158874, issued 15 July 1975. (RZhRadiot, 6/77, 6Ye183)
129. Vasyunina, N.P., P.N. Znadvorov, and V.M. Moldavskaya (32). Optical rectification in an external resonator. KE, no. 5, 1977, 1009-1013.
130. Zavgorodneva, S.I., V.I. Kuprenyuk, and V.Ye. Sherstobitov (0). Unstable resonator with field rotation. KE, no. 6, 1977, 1383-1385.

2. Pump Sources

131. Basov, Yu.G., V.N. Makarov, V.A. Tatarskiy, and S.A. Boldyrev (0). Interrelationship in changes of radiation characteristics of lasers and flashlamps during their long-term operation. ZhPS, v. 26, no. 5, 1977, 834-840.
132. Basov, Yu.G., and A.F. Sil'nitskiy (0). Comparative studies on pumping of dye lasers by tubular and coaxial flashlamps. ZhPS, v. 26, no. 6, 1977, 996-999.
133. Basov, Yu.G., S.G. Morozova, and A.N. Tokareva (0). Effect of the development of a discharge in flashlamps on the efficiency of laser pumping. RiE, no. 5, 1977, 1014-1022.

134. Fominskiy, L.P. (O). Application of a non-selfsustaining discharge with recuperation of the ionizing beam. ZhTF P, no. 24, 1976, 1132-1135.
(RZhF, 6/77, 6G289)
135. Galun, B.V. (O). Thyristor oscillator with automatic regulation of the current pulse amplitude for pumping semiconductor lasers. PTE, no. 3, 1977, 98-100.
136. Galun, B.V., I.V. Kudryavtseva, and T.P. Shevkunova (O). Small-scale oscillator for pumping a semiconductor laser. PTE, no. 3, 1977, 184-185.
137. Levshuk, L.A., D.A. Noskov, and Ye.V. Chikin (O). Controlling the current in an e-beam by means of an auxiliary discharge. EOM, no. 2, 1977, 43-46.
138. Malashkevich, G.Ye., and V.V. Kuznetsova (O). Using laser converters to improve laser efficiency. ZhTF P, no. 24, 1976, 1130-1132.
139. Matyushin, G.A., L.S. Mel'nikov, V.M. Podgayetskiy, and M.I. Tribel'skiy (O). Interaction between high-power flashlamp radiation and an absorptive liquid. KE, no. 5, 1977, 1076-1084.
140. Orishich, A.M., A.G. Ponomarenko, V.G. Posukh, and S.P. Shalamov (O). Study of a vacuum diode with an extended cathode. IN: Sb 4, 34-36.
(RZhF, 6/77, 6D1586)

3. Deflectors

141. Andrzejewski, N., B. Gasior, and W. Gregorkiewicz (NS). Deflection of a laser beam by means of the laser resonator. BWAT, no. 8, 1976, 21-30.
(RZhF, 6/77, 6D1256)

4. Diffraction Gratings

142. Bozhevol'nyy, S.I., Ye.M. Zolotov, V.A. Kiselev, V.M. Pelekhatty, A.M. Prokhorov, and Ye.A. Shcherbakov (1). Three-dimensional diffraction grating for integrated optics. CAN SSSR, v. 235, no. 1, 1977, 86-88.

5. Filters

143. Akimova, I.V., L.N. Borovich, I.P. Vasilishcheva, A.V. Dudenkova, A.V. Yegorov, A.S. Nasibov, O.N. Talenskiy, Yu.M. Popov, and P.V. Shchapkin (1). Determining the depth of the damaged layer in laser screens prepared from cadmium sulfide single crystals. KE, no. 6, 1977, 1357-1359.
144. Ostrovskiy, A.S., I.N. Rallev, and I.M. Pochernyayev (0). Coherent orthogonal optical filter. IN: Sb 5, 141-146. (RZhF, 6/77, 6D1377)

6. Mirrors

145. Grassme, W., and H. Voelckel (NS). Mirror for laser resonators. Patent GDR, no. 119499, issued 20 April 1976. (RZhRadiot, 5/77, 5Ye184)

7. Detectors

146. Galus, W., T. Persak, and J. Piotrowski (NS). Discussion of various parameters of uncooled detectors of 10.6 μ radiation, based on (Cd, He) Te. BWAT, no. 11, 1976, 151-161. (RZhF, 5/77, 5D1228)
147. Guettich, R. (NS). Thermal radiation detector based on pyroelectric structures. Potsdammer Forschungen, v. B, no. 7, 1976, 89-101. (RZhF, 6/77, 6D155s)

148. Movsesyan, R.A., L.Ye. Chirkov, and V.A. Papyan (224). Theoretical study of a detection method using a photodetector of SHF-modulated laser radiation. IN: Tr 4, 325-330. (RZh Issledovaniye kosmicheskogo prostranstva, 6/77, 6.52.266)
149. Muradyan, A.G., and S.A. Ginzburg (135). Structure and characteristics of an optimal filter for an optical photodiode detector. KE, no. 5, 1977, 1147-1149.
150. Piotrowski, J. (Polish). Limit characteristics of (Cd, Hg) Te photodiodes. FTP, no. 6, 1977, 1088-1093.
151. Rozanov, B.A., L.I. Soldatkina, and G.A. Profatilova (24). Study of an extrapolation-phase method for detecting coherent pulsed sequences with an unknown Doppler shift. IN: Tr 5, 104-111. (RZhRadiot, 6/77, 6Ye269)

8. Modulators

152. Basov, A.A., A.A. Vorob'yev, and I.G. Katayev (0). Optical beam scanning. RiE, no. 6, 1977, 1214-1217.
153. Bauer, R.K., A. Kowalczyk, A. Balter, H. Cherek, and W. Roguski (NS). An efficient elasto-optic modulator. Optica applicata [Poland], no. 3-4, 1976, 43-47. (RZhRadiot, 5/77, 5Ye176)
154. D'yakonov, A.M., Yu.V. Ilisavskiy, I.I. Farbshteyn, E.Z. Yakhkind, and I.A. Deryugin (4). Efficient acousto-optic tellurium modulator. ZhTF P, no. 12, 1977, 564-568.

155. Gorelenko, A.Ya., V.A. Tolkachev, and D.M. Khalimanovich (0). Bisantenes: a material for phototropic Q-switching of a ruby laser. ZhPS, v. 26, no. 6, 1977, 993-995.
156. Gusev, M.Ye., and M.A. Novikov (0). Differential electrooptic switch. RiE, no. 6, 1977, 1258-1262.
157. Lugovskiy, V.K. (1). Calculating the magnetic field of a Faraday switch for a high-power laser. KSpF, no. 11, 1976, 37-43. (RZhF, 6/77, 6D1265)
158. Magdich, L.N., and V.Ya. Molchanov (0). Nonmutual phenomena in acousto-optical modulators. ZhTF, no. 5, 1977, 1068-1069.
159. Serdyukov, V.I., M.M. Makogon, and Yu.N. Ponomarev (0). Passive Q-switching in a resonator with a prism for a ruby laser. ZhPS, v. 26, no. 5, 1977, 932-934.
160. Shakin, O.V., A.G. Kuzin, S.V. Kulakov, V.V. Lemanov, V.P. Pikarnikov, Ye.V. Sinyakov, S.V. Akimov, M.Yu. Lazovskiy, I.V. Lesnikov, and N.F. Naryshkin (0). Acoustooptic lead molybdate crystal modulator for television systems. ZhTF P, no. 11, 1977, 494-497.
161. Yesepkina, N.A., V.Yu. Petrun'kin, Ye.T. Aksenov, V.A. Grigor'yev, V.P. Pikarnikov, S.V. Pruss-Zhukovskiy, and V.V. Soroka (0). Multichannel acoustooptical modulators. IN: Sb 5, 96-105. (RZhF, 6/77, 6D1264)

F. NONLINEAR OPTICS

1. Frequency Conversion

162. Anikin, V.I., K.N. Drabovich, and A.N. Dubovik (2). Coherent effects during the summing of optical frequencies under conditions of two-photon resonance. ZhETF, v. 72, no. 5, 1977, 1727-1737.
163. Antipenko, B.M., S.P. Voronin, A.A. Mak, V.A. Pis'menny, V.N. Polikarpova, and Yu.V. Tomashevich (0). Neodymium laser emission frequency tuning by means of resonance pumping of Tm^{3+} and Ho^{3+} -doped YAG crystals. KE, no. 5, 1977, 1121-1123.
164. Avetisyan, Yu.O., and P.S. Pogosyan (0). Generation of a difference frequency in a lithium niobate crystal by means of a picosecond laser. ZhTF P, no. 24, 1976, 1144-1146. (RZhF, 6/77, 6D1128)
165. Balasanyan, R.N., K.G. Belabayev, E.S. Vartanyan, V.T. Gabriyelyan, and R.B. Kostanyan (0). Second harmonic generation in an Fe- and Nd-doped $LiNbO_3$ crystal. IN: Sb 1, 271. (RZhRadiot, 6/77, 6Ye163)
166. Bokut', B.V., V.S. Davydov, N.S. Kazak, A.T. Malashchenko, I.A. Morozov, and M.M. Pinayeva (0). Growth and optical properties of selenious acid crystals. ZhPS, v. 26, no. 5, 1977, 911-913.
167. Bredikhin, V.I., V.N. Genkin, S.P. Kuznetsov, and M.A. Novikov (8). A 90-degree synchronism in $KD_{2x-2(1-x)}PO_4$ crystals during doubling of the second harmonic of an Nd laser. ZhTF P, no. 9, 1977, 407-409.

168. Dolgoplov, S.G., V.M. Klement'yev, V.I. Kovalevskiy, and Yu.A. Matyugin (0). Using a metal-oxide-metal diode to multiply and shift laser frequencies in the near IR and visible ranges. RIE, no. 5, 1977, 1054-1056.
169. Domnin, Yu.S., V.M. Tatarenkov, and P.S. Shumyatskiy (140). Laser converter of standard frequency into the submillimeter range. KE, no. 5, 1977, 1158-1160.
170. Filipenko, O.S., V.D. Shigorin, V.I. Ponomarev, L.O. Atovmyan, Z.Sh. Safina, and B.L. Tarnopol'skiy (07,1). Crystal structure and nonlinear optical properties of monoclinic n-nitro-n'-methylbenzylidene-aniline. Kristal, no. 3, 1977, 534-541.
171. Gyuzalyan, R.N., D.G. Sarkisyan, and M.L. Ter-Mikaelyan (59). Picosecond source of coherent optical radiation, tunable in the 350-680 nm range. KE, no. 5, 1977, 1138-1140.
172. Kachibaya, V.N., O.A. Chikhladze, and D.A. Polovitskaya (39). Electrooptic effect in α -HIO₃ crystals. AN GruzSSR. Soobshcheniya, v. 86, no. 2, 1977.
173. Kulakov, S.V., V.V. Kludzin, and V.I. Yezhov (0). Acoustooptical converters of the time scale of radio signals. IN: Sb 5, 125-134. (RZhRadiot, 6/77, 6Ye258)
174. Kuprishov, V.F., A.L. Mikaelyan, A.V. Semenov, and Yu.G. Turkov (0). Second harmonic generation in a c-w regime in LiIO₃ crystals. IN: Sb 1, 270. (RZhRadiot, 6/77, 6Ye164)

175. Volosov, V.D., and R.B. Andreyev (7). Attachment for frequency doubling of laser radiation. OMP, no. 6, 1977, 66-67.
176. Yershov, L.S., V.Yu. Zalesskiy, and V.N. Sokolov (7). Stable conversion of radiation from 1.06 μ to the fourth harmonic using a master oscillator with a combined medium. OMP, no. 6, 1977, 56-58.

2. Parametric Processes

177. Danelyus, R., G. Dikchyus, V. Kabelka, and A. Piskarskas (49). Highly efficient picosecond parametric laser with a narrow radiation spectrum and a high pulse repetition rate. ZhTF, no. 5, 1977, 1075-1077.
178. Dzhotyan, G.P., Yu.Ye. D'yakov, S.M. Pershin, and A.I. Kholodnykh (2). Competition between stimulated Raman scattering and the parametric process in the resonator of a parametric LiIO_3 crystal laser. KE, no. 6, 1977, 1215-1226.
179. Fischer, R. (NS). Optical parametric oscillators. Potsdammer Forschungen, v. B, no. 7, 1976, 60-67. (RZhF, 6/77, 6D1119)
180. Lugovoy, V.N. (1). New type of parametric laser and amplifier. ZhETF P, v. 25, no. 12, 1977, 563-566.

3. Stimulated Scattering

a. Raman

181. Bel'dyugin, I.M., and Ye.M. Zemskov (0). The effect of polarization of fields on their interaction under stimulated Raman scattering. KE, no. 5, 1977, 1114-1117.

182. Dzhotyan, G.P., Yu.Ye. D'yakov, I.G. Zubarev, A.B. Mironov, and S.P. Mikhaylov (1). The effect of the spectral range and Stokes signal statistics on the efficiency of stimulated Raman scattering of nonmonochromatic pumping. KE, no. 6, 1977, 1377-1381.
183. Dzhotyan, G.P., and Yu.Ye. D'yakov (2). Saturation of stimulated Raman scattering under multimode pumping. VMU, no. 3, 1977, 70-73.
184. Grasyuk, A.Z., V.F. Yefimkov, I.G. Zubarev, A.V. Kotov, and V.G. Smirnov (1). Active media, construction and schematics of high-power Raman lasers. IN: Tr 1, 116-146.
185. Rezayev, N.I., and M.B. Tabibi (2). Effect of complexing on the threshold of generation of stimulated Raman scattering lines in solutions. VMU, no. 1, 1977, 26-31.
186. Venkin, G.V., D.N. Klyshko, and L.L. Kulyuk (2). The angular structure of high-order components of stimulated Raman light scattering. KE, no. 5, 1977, 982-988.
187. Zel'dovich, B.Ya., and V.V. Shkunov (1,17). Wave front reconstruction under stimulated Raman light scattering. KE, no. 5, 1977, 1090-1098.
188. Zubarev, I.G., A.B. Mironov, and S.I. Mikhaylov (1). Effect of spatial and time noncoherence of pumping on the amplification of a Stokes signal. KE, no. 5, 1977, 1155-1158.

b. Rayleigh

189. Biryukov, V.N., and V.S. Starunov (1). Anomalous displacement of a stimulated scattering line of a Rayleigh line wing in an external transverse resonator. KSpF, no. 11, 1976, 31-36. (RZhF, 6/77, 6D1117)

c. Miscellaneous Scattering

190. Herrmann, J., H-E. Ponath, and M.Schubert (NS). Nonstationary approach to stimulated scattering in representative quasi-frequencies taking initial processes as an example. Potsdammer Forschungen, v. B, no. 7, 1976, 116-123. (RZhF, 6/77, 6D1108)
191. Khazanov, I.V. (8). Nonlinear theory of stimulated scattering of waves. IVUZ Radiofiz, no. 6, 1977, 887-892.
192. Yemel'yanov, V.I., and Yu.L. Klimontovich (0). Self-modulation of stimulated scattering of light in a plasma. IN: Sb 6, 340-342. (RZhMekh, 5/77, 5B404)

4. Self-focusing

193. Gase, R., and H. Hein (NS). Experiments on self-focusing of multimode laser radiation and their description by a statistical model. Annalen der Physik, v. 33, no. 6, 1976, 475-480. (RZhF, 5/77, 5D952)

5. Acoustic Interaction

194. Aleksandrov, K.S., A.T. Anistratov, A.V. Zamkov, and I.S. Rez (210). Acoustooptic and photoelastic properties of KH_2PO_4 -type crystals. FTT, no. 6, 1977, 1863-1866.

195. Gudzenko, A.I., L.N. Deryugin, S.A. Zabuzov, V.V. Kludzin, L.A. Osadchev, G.F. Sirotin, V.Ye. Sotin, B.P. Razzhvin, and A.A. Tishchenko (0). Experimental study of a plane acoustooptic deflector. RiE, no. 6, 1977, 1305-1306.
196. Gulyayev, Yu.V., and G.N. Shkerdin (0). Laser with distributed feedback from an acoustic wave and Bragg reflectors. RiE, no. 6, 1977, 1210-1213.
197. Lyamshev, L.M. (21). Theory of optical generation of sound in a moving medium. DAN SSSR, v. 234, no. 4, 1977, 814-817.

6. General Theory

198. Al'tshuler, G.B., Ye.G. Dul'neva, V.B. Karasev, and S.F. Sharlay (30). Self-rotation of an ellipse of polarized light in a medium with inertial nonlinearity in the index of refraction. ZhTF P, no. 9, 1977, 389-393.
199. Al'tshuler, B.B., A.I. Barbashev, V.B. Karasev, K.I. Krylov, V.M. Ovchinnikov, and S.F. Sharlay (0). Direct measurement of the nonlinearity tensor component of optical sensitivity, for determining the nonlinearity of the index of refraction of optical materials. ZhTF P, no. 11, 1977, 523-528.
200. Anisimov, S.I. (73), V.A. Benderskiy (67), and Gy. Farkas (Hungarian). Nonlinear photoelectric effect in metals under the action of laser radiation. UFN, v. 122, no. 2, 1977, 185-222.
201. Badziak, J., K. Jach, W. Nowakowski, J. Owsik, and W. Szyplula (NS). Deformation with time of pulses at the fundamental and second harmonic in a nonlinear crystal. BWAT, no. 1, 1976, 31-42. (RZhF, 6/77, 6D1122)

202. Blaszczyk, A. (NS). Seventh All-Poland Conference on Quantum Electronics and Nonlinear Optics in Poznan, 26-29 April 1976. Postepy fizyki, no. 5, 1976, 497-499. (RZhF, 6/77, 6D1066)
203. Bokut', B.V., and N.S. Kazak (0). Generation of a variable electric field in nonlinear crystals under the action of electromagnetic radiation. ZhPS, v. 26, no. 6, 1977, 1007-1011.
204. Herrmann, J., and H.E. Ponath (NS). Theoretical treatment of non-stationary scattering by phonons and polaritons. Part 2. Transient Raman scattering by polaritons and dipole active phonons. Annalen der Physik, v. 33, no. 6, 1976, 427-447. (RZhF, 5/77, 5D913)
205. Kaczmarek, F., and H. Klejman (NS). Seventh Conference on Quantum Electronics and Nonlinear Optics in Poznan, 26-29 April 1976. Przegląd telekomunikacji, no. 11, 1976, 338-341. (RZhF, 6/77, 6D1065)
206. Kaplan, A.Ye. (388). Theory of the hysteresis reflection phenomenon and refraction of light at the boundary of a nonlinear medium. ZhETF, v. 72, no. 5, 1977, 1710-1726.
207. Klyshko, D.N. (2). Correlation of the Stokes and anti-Stokes components during inelastic light dispersion. KE, no. 6, 1977, 1341-1350.
208. Nezhevenko, Ye.S., and B.I. Spektor (0). Nonlinear optical image conversion. IN: Sb 5, 68-74. (RZhF, 6/77, 6D1330)
209. Ponath, H.E., and M.W. Schubert (NS). Theoretical treatment of nonstationary scattering by phonons and polaritons. Part 1. Derivation of the basic equations. Annalen der Physik, v. 33, no. 6, 1976, 413-426. (RZhF, 5/77, 5D912)

210. Ponath, H.E. (NS). Theory of nonstationary excitation from exciton-polaritons during two-photon absorption. Annalen der Physik, v. 33, no. 6, 1976, 459-474. (RZhF, 5/77, 5D906)
211. Rozanov, N.N. (0). Hybrid reflection regimes and the transmissivity of light by nonlinear media. ZhTF P, no. 12, 1977, 583-589.
212. Smirnov, D.F., and A.S. Troshin (362). Intensity fluctuation spectrum of nonlinear resonance fluorescence in a system of atoms. ZhETF, v. 72, no. 6, 1977, 2055-2063.
213. Sokolov, I.V. (12). Two-photon absorption of light radiated in a two-photon process. ZhETF, v. 72, no. 5, 1977, 1687-1693.
- G. SPECTROSCOPY OF LASER MATERIALS
214. Dumitras, D.C. (NS). Parameters of spectral absorption lines in CO₂. Studii si cercetari de fizica, no. 10, 1976, 967-987. (RZhF, 6/77, 6D1045)
215. Kaminskiy, A.A., G.A. Bogomolova, D.N. Vylegzhanin, Kh.S. Bagdasarov, A.M. Kevorkov, and M.M. Gritsenko (0). Spectroscopic properties of Nd³⁺ ions in garnet compounds forming in the Y₂O₃-Ga₂O₃ system. Physica status solidi (a), v. 38, no. 1, 1976, 409-422. (RZhF, 6/77, 6D1148)
216. Vol'vachev, G.T., N.S. Leshenyuk, and G.M. Smirnov (0). Studying the kinetics of infrared luminescence by means of a stroboscopic synchronous integrator. ZhPS, v. 26, no. 5, 1977, 864-869.

H. ULTRASHORT PULSE GENERATION

217. Bryukner, F., V.S. Dneprovskiy, and V.N. Chumash (0). Subnanosecond dye laser. IN: Sb 1, 100. (RZhRadiot, 6/77, 6Ye85)
218. Gibelev, A.I., Ye.D. Isyanova, V.V. Korobkin, A.L. Levit, V.M. Ovchinnikov, A.Yu. Pirogov, R.V. Serov, and A.A. Malyutin (0). The 100-OGM picosecond pulse generator. IN: Sb 1, 374-375. (RZhRadiot, 6/77, 6Ye312)
219. Kovalev, A.A., and L.B. Levashkevich (0). Ultrashort pulse generation in a laser with passive switching by an electrooptical switch. IN: Sb 1, 78-80. (RZhRadiot, 6/77, 6Ye108)
220. Makhviladze, T.M., I.G. Sinitsyn, and L.A. Shelepin (1). Transient processes during propagation of an ultrashort pulse in a three-level medium. KE, no. 6, 1977, 1313-1317.
221. Makukha, V.K., V.S. Smirnov, and V.M. Semibalamut (10). Generation of ultrashort pulses in a negative feedback laser. KE, no. 5, 1977, 1023-1027.
222. Vodop'yanov, K.L., A.A. Malyutin, and P.P. Pashinin (0). Subnanosecond pulse generation in a laser with forced mode-locking. IN: Sb 1, 60. (RZhRadiot, 6/77, 6Ye112)
223. Zaporozhchenko, V.A., A.N. Rubinov, and T.Sh. Efendiyev (0). Ultrashort pulse generation in a dye laser with distributed feedback. IN: Sb 1, 86-87. (RZhRadiot, 6/77, 6Ye84)

J. THEORETICAL ASPECTS OF ADVANCED LASERS

224. Bushuyev, V.A., and R.N. Kuz'min (2). Inelastic scattering of X-ray and synchrotron radiation in crystals and coherent effects in inelastic scattering. UFN, v. 122, no. 1, 1977, 81-124.

K. GENERAL LASER THEORY

225. Aburabya, A.M., L.P. Godenko, and V.S. Mashkevich (5). Study of a spectrally inhomogeneous active medium by exposure to a giant external pulse. KE, no. 6, 1977, 1237-1242.
226. Agapov, A.M., M.Ye. Gertsenshteyn, and V.A. Pogosyan (0). Optical pulse generators based on a transient radiation effect. ZhTF P, no. 9, 1977, 427-431.
227. Anokhov, S.P., G.A. Galich, V.I. Kravchenko, M.S. Soskin, and Ya.I. Khanin (0). Solid state dynamic-mode sweep laser. IN: Sb 1, 166-167. (RZhRadiot, 6/77, 6Ye152)
228. Belonuchkin, V.Ye., N.I. Yeskin, S.M. Kozel, E.P. Kuznetsov, and G.R. Lokshin (118). Detection of scattered radiation using laser amplifiers. KE, no. 6, 1977, 1318-1324.
229. Borman, V.D., A.S. Bruyev, L.A. Maksimov, and B.I. Nikolayev (16). Characteristics of rotational transitions during collisions of molecules. ZhETF, v. 72, no. 6, 1977, 2100-2109.

230. Bykovskiy, N.Ye., and Yu.V. Senatskiy (1). Improving the spatial homogeneity of intensity distribution in high-power laser beams. Fizicheskiy institut SN SSSR. Kvantovaya radiofizika. Preprint, no. 15, 1977, 9 p. (RZhF, 6/77, 6D1255)
231. Chekalinskaya, Yu.I., and Ye.P. Chechenina (3). Polarization and frequency characteristics of a regenerative laser amplifier with a ring anisotropic resonator. Institut fiziki AN BSSR. Preprint, no. 106, 1976, 54 p. (RZhF, 5/77, 5D944)
232. Chekalinskaya, Yu.I., and Ye.P. Chechenina (3). Polarization and spectral characteristics of a regenerative laser amplifier with a linear anisotropic resonator. Institut fiziki AN BSSR. Preprint, no. 111, 1976, 57 p. (RZhF, 5/77, 5D943)
233. Csillag, L. (NS). Lasers [properties of laser light]. Kep-es hangtechnika, no. 6, 1976, 161-169. (RZhRadiot, 6/77, 6Ye354)
234. Dement'yev, V.A., T.N. Zubarev, and A.N. Orayevskiy (1). Regimes of radiation intensity pulsations in lasers. IN: Tr 1, 3-74.
235. Fedorov, M.V. (1). Vibrational-rotational spectra and the process of excitation of a molecule in an intense resonance wave field. Fizicheskiy institut AN SSSR. Teoreticheskaya fizika. Preprint, no. 3, 1977, 22 p. (RZhF, 6/77, 6D1070)
236. Filyukov, A.A., T.G. Yelizarova, and V.B. Mitrofanov (71). Six-level model of a recombination laser using ionized strontium transitions. Institut prikladnoy matematiki AN SSSR. Preprint, no. 5, 1976, 22 p. (RZhF, 6/77, 6D1184)

237. Golubeva, N.S., I.I. Ignat'yev, V.I. Ikryannikov, V.P. Lebedenko, V.I. Rozhdestvin, and O.A. Smirnova (24). Interaction of coupled single-pulse lasers. IN: Tr 5, 84-97. (RZhRadiot, 6/77, 6Ye252)
238. Gordov, Ye.P. (0). Statistical description of an intense electromagnetic field. Teoreticheskaya i matematicheskaya fizika, v. 30, no. 1, 1977, 103-113.
239. Gudzenko, L.I., and S.I. Yakovlenko (1). Problems of atomic reactor-lasers. IN: Tr 3, 99-123.
240. Klyshko, D.N. (2). Using vacuum fluctuations as a light brightness reference. KE, no. 5, 1977, 1056-1062.
241. Korolev, V.F. (2). Stimulated emission in a rotating anharmonic oscillator. Deposit at VINITI, no. 1123-77, 22 March 1977, 12 p. (RZhF, 6/77, 6D1131)
242. Makarov, A.A. (72). Coherent excitation of equidistant multilevel systems in a resonant monochromatic field. ZhETF, v. 72, no. 5, 1977, 1749-1761.
243. Shalagin, A.M. (72). Non-shifted resonant scattering line in an intense quasimonochromatic field. ZhETF, v. 72, no. 5, 1977, 1775-1782.
244. Umarov, G.Ya., Ag.T. Mirzayev, Kh.Kh. Khadzhimukhamedov, As.T. Mirzayev, A.A. Uzakov, and E.P. Bakhgat (227). Study of the statistical properties of intensity-modulated laser radiation. IAN Uz, no. 3, 1977, 47-51.

245. Vyatchanin, S.P. (2). Efficient cooling of quantum systems.
DAN SSSR, v. 234, no. 6, 1977, 1295-1297.
246. Yemel'yanov, V.I. (2). Self-induction of distributed feedback between
opposed waves in resonator-less amplifier systems. ZhTF P, no. 12,
1977, 554-559.
247. Yershov, G.M. (38). Theoretical study of the effect of irreversible
relaxation on an optical echo signal during single-pulse excitation.
ZhETF, v. 72, no. 6, 1977, 2130-2140.
248. Zagidullin, R.Sh., I.I. Ignat'yev, V.A. Korostelev, V.I. Popov, and
S.I. Khomenko (24). Graphic-analytical method for designing a laser
operating in single-pulse and spiked lasing regimes. IN: Tr 5, 98-104.
(RZhRadiot, 6/77, 6Ye4)

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

249. Krasnov, M.M., M.F. Stel'makh, B.N. Malyshev, V.N. Prozorov, P.I. Saprykin, and M.G. Batrukova (0). Laser ophthalmologic apparatus. Author's certificate USSR, no. 446981, issued 6 August 1976. (RZhRadiot, 5/77, 5Ye427)
250. Manykin, A.A., A.K. Fannibo, E.A. Manykin, and S.M. Klimenko (425,16). Using high-power coherent light to remove the capsid of a C_d bacteriophage in order to study the packing of DNA. DAN SSSR, v. 235, no. 2, 1977, 491-493.
251. Matinyan, Ye.G. (0). Using holography to solve problems in endoscopy. IN: Sb 7, 298-306. (RZhRadiot, 5/77, 5Ye492)

B. COMMUNICATIONS SYSTEMS

252. Avdeyeva, N.I., V.I. Borisov, and V.I. Lebedev (3). Some characteristics of lasing in thin-film lasers with an amplifying boundary medium. KE, no. 6, 1977, 1370-1372.
253. Belanov, A.S., and Ye.M. Dianov (1). Propagation of natural waves in multilayer optical waveguides. Part 3. Waveguides with negative waveguide dispersion and strong filtration of the higher modes. KE, no. 5, 1977, 1042-1049.

254. Boganov, A.G., Ye.M. Dianov, L.S. Korniyenko, Ye.P. Nikitin, B.S. Rudenko, A.O. Rybaltovskiy, and P.V. Chernov (1,420,98). Nonhydroxylic quartz glass for low-loss fiberoptic lightguides and its comparative radiation-optical properties. KE, no. 5, 1977, 996-1003.
255. Contributions to optics and quantum electronics. Materials of the annual spring seminar on optics in the GDR, Juehlungsborn, April 1975.
Potsdammer Forschungen, v. B, no. 7, 1976, 1-253. (RZhF, 6/77, 6D1067)
256. Frahm, J. (NS). Integrated optics. Potsdammer Forschungen, v. B, no. 7, 1976, 9-52. (RZhRadiot, 6/77, 6Ye208)
257. Gerasimenko, N.N., V.G. Pan'kin, K.K. Svitashv, S.A. Sokolov, and G.M. Tseytlin (10). Study of waveguide structures formed by irradiation of fused quartz by hydrogen ions. KE, no. 6, 1977, 1372-1375.
258. Helszlunski, J., M. Rzewuski, W. Jasiewicz, R.Car, L. Sliwa, and L. Lewandowski (NS). Wideband laser communications. Przegląd telekomunikacje, no. 8-9, 1976, 252-255. (RZhRadiot, 6/77, 6Ye225)
259. Kokurin, Yu.L. (1). Laser ranging of the moon. IN: Tr 1, 159-225.
260. Lemanov, V.V., and B.V. Sukharev (0). Mode conversion in anisotropic plane lightguides. ZhTF P, no. 24, 1976, 1105-1107. (RZhRadiot, 5/77, 5Ye192)
261. Logginov, A.S., V.I. Pogonin, and V.Ye. Solov'yev (0). Optical booster using an injection laser. IVUZ Radioelektr, no. 5, 1977, 23-29.

262. Prokhorov, A.M., A.A. Spikhal'skiy, and V.A. Sychugov (1). Calculation and optimization of the radiation parameters of a distributed feedback structure. KE, no. 5, 1977, 989-995.
263. Shchelkunov, K.N., V.B. Braude, and M.D. Model' (0). Capacity of optical communication channels. RiE, no. 6, 1977, 1143-1148.
264. Sokolov, V.K., and B.I. Rapoport (0). Use of optical spatial image-filtration in television technology. IN: Sb 5, 38-51. (RZhF, 6/77, 6D1335)
265. Vinokurov, G.N., and N.N. Rozanov (0). Types of waves in an anisotropic inhomogeneous medium with axial symmetry. KE, no. 6, 1977, 1276-1281.
266. Wolinski, W., M. Nowiski, D. Kwasniewski, and A. Kowalski (NS). Pulsed laser head [consisting of optical resonator and flashlamp; concave spherical mirrors in resonator have low sensitivity to thermal deformations of laser rod]. Patent Poland, no. 77250, issued 31 July 1975. (RZhRadiot, 6/77, 6Ye123)
267. Zabiyakin, Yu.Ye. (7). First All-Union Conference on Laser Optics, Leningrad, 4-8 January 1977. OMP, no. 6, 1977, 72-73.
268. Zakharov, B.V., Yu.Yu. Lapimaa, and Kh.V. Khinrikus (255). Laser communications system for transmitting a teletype signal. IN: Tr 6, 27-29. (RZhRadiot, 5/77, 5Ye360)
269. Zenchenko, S.A., M.G. Livshits, and T.I. Shchevchik (334). Mode-locked laser for superwideband communications systems. KE, no. 6, 1977, 1203-1207.

270. Zlenko, A.A., V.A. Kiselev, A.M. Prokhorov, A.A. Spikhal'skiy, and V.A. Sychugov (0). Radiation and reflection in modes of optical waveguides based on a thin film with a corrugated surface. Potsdammer Forschungen, v. B, no. 7, 1976, 232-236. (RZhF, 6/77, 6D1401)
271. Zolotov, Ye.M., V.A. Kiselev, V.M. Pelekhatyy, A.M. Prokhorov, V.A. Chernykh, and Ye.A. Shcherbakov (1). Study of loaded optical diffused waveguides. KE, no. 5, 1977, 1160-1163.

C. BEAM PROPAGATION

1. In the Atmosphere

272. Andreyev, G.A., V.P. Bisyarin, A.V. Sokolov, and G.M. Strelkov (0). Propagation of laser radiation in the earth's atmosphere. IN: Sb 8, 5-148. (RZhF, 6/77, 6Zh142)
273. Aref'yev, V.N., and V.I. Dianov-Klokov (220). Molecular absorption of CO₂ laser radiation in the earth's troposphere under stable anticyclonic conditions. KE, no. 6, 1977, 1364-1368.
274. Aref'yev, V.N., and N.I. Sizov (220). Resonance absorption of CO₂ laser radiation by carbon dioxide gas. KE, no. 6, 1977, 1372-1375.
275. Dianov-Klokov, V.I., V.V. Lukshin, O.A. Matveyeva, and I.Ya. Sklyarenko (78). Distribution of methane in the troposphere. FAiO, no. 5, 1977, 529-536.
276. Kabanov, M.V., and S.M. Sakerin (78). Determining the coefficients of attenuation of optical radiation in the atmosphere according to the blurring of the horizon line. FAiO, no. 5, 1977, 522-528.

277. Milyutin, Ye.R., and V.B. Savitskaya (0). Frequency spectrum of phase fluctuations of a collimated laser beam propagating in a turbulent atmosphere. RiE, no. 5, 1977, 1062-1065.
278. Stankevich, V.S. (0). Measuring the absorption of 118.6 μ H₂O laser radiation by pure water vapor. RiE, no. 6, 1977, 1273-1276.
279. Tvorogov, S.D., and L.M. Nesmelova (0). Nature of the attenuation of light in the 8-12 μ atmospheric transparency window. Cited in FAiO, no. 5, 1977, 561.
280. Vanin, N.V. (2). Use of gas analyzers in atmospheric probe lidars. FAiO, no. 5, 1977, 515-521.
281. Zuyev, V.Ye., V.P. Lukin, V.V. Pokasov, V.I. Shishlov, and N.Ye Yakovlev (0). Automation of experiments for studying the structure of atmospheric turbulence. IN: Sb 9, 113-115. (RZhMekh, 5/77, 5B1288)
282. Zuyev, V.Ye., V.P. Lopasov, and I.S. Tyryshkin (78). Experimental study of broadening the absorption line contour of water vapor using nitrogen. KE, no. 6, 1977, 1375-1377.
283. Zuyev, V.Ye., and V.P. Lukin (0). First All-Union Conference on Atmospheric Optics, Tomsk, 25-27 June 1976. FAiO, no. 5, 1977, 561-563.
284. Zuyev, V.Ye., and M.V. Kabanov (0). Propagation of optical signals in a scattering atmosphere. Cited in FAiO, no. 5, 1977, 561.

285. Zuyev, V.Ye., N.V. Kozlov, E.V. Makiyenko, I.E. Naats, and I.V. Samokhvalov (78). Some results in probing the microstructure of a stratospheric aerosol by a multifrequency lidar. FAiO, no. 6, 1977, 648-654.

2. In Liquids

286. Akopyan, S.A., S.M. Arakelyan, L.Ye. Arushanyan, and Yu.S. Chilingaryan (37). Spatial coherence of laser radiation passing through a liquid crystal near a phase transition into an isotropic liquid. KE, no. 6, 1977, 1387-1390.
287. Golubnichiy, P.I., K.F. Olzoyev, and A.D. Filonenko (424). Plasma-acoustic cavitation phenomena triggered by a laser pulse in liquid crystal systems. UFZh, no. 6, 1977, 1039-1041.

3. Theory

288. Bol'shov, L.A., V.V. Likhanskiy, and A.P. Napartovich (0). Instability of coherent propagation of optical pulses in resonantly absorbing media. ZhETF, v. 72, no. 5, 1977, 1769-1774.
289. Gurvich, A.S., and S.S. Kashkarov (64). Problem of amplifying the scattering in a turbulent medium. IVUZ Radiofiz, no. 5, 1977, 794-796.
290. Kovacs, K.P. (NS). Observation of distortions during propagation of optical beams in laser experiments. Fizikai szemle, v. 25, no. 10, 1975, 377-380. (RZhF, 5/77, 5D1061)

291. Volkovitskiy, O.A., and V.K. Mamonov (220). The kinetics of bleaching a moving droplet aerosol using CO₂ laser radiation. KE, no. 5, 1977, 1123-1127.
292. Yalamov, Yu.I., V.B. Kutukov, and Ye.R. Shchukin (0). Motion of a droplet in an optical radiation field at low Knudsen number values. DAN SSSR, v. 234, no. 5, 1977, 1047-1050.
- D. COMPUTER TECHNOLOGY
293. Bencze, Gy.L., and P. Varga (NS). Delocalization of the information stored in a holographic memory. Optica applicata [Poland], no. 3-4, 1976, 35-42. (RZhF, 5/77, 5D1099)
294. Berestnev, S.P., A.A. Vasil'yev, V.A. Yezhov, I.N. Kompanyets, and A.M. Polyakova (1). Formation of a holographic beam splitter in the optoelectronic circuit of a holographic memory device. KE, no. 5, 1977, 1149-1151.
295. Dudorov, V.N., V.V. Randoshkin, and R.V. Telesnin (2). Synthesis and physical properties of rare-earth ferrite-garnet single-crystal films. UFN, v. 122, no. 2, 1977, 253-293.
296. Gibin, I.S., and P.Ye. Tverdokhlebs (0). Information processing in optical holographic-memory systems. IN: Sb 5, 5-23. (RZhF, 6/77, 6D1326)
297. Glazer, A.A., Yu.M. Shcherbakov, and A.P. Potapov (421). $\frac{\text{Mn}}{0.75} \frac{\text{Ti}}{0.25} \text{Bi}$ films used as a magneto-optical memory medium. KE, no. 6, 1977, 1381-1383.

298. Glushkov, A.S., S.B. Gudevich, V.B. Konstantinov, V.I. Kochenov, and A.I. Latyshev (0). Permanent holographic memory. IN: Sb 5, 23-30. (RZhF, 6/77, 6D1327)
299. Gurevich, S.G. (0). Information capacity of coherent information processing systems. IN: Sb 7, 46-56. (RZhF, 6/77, 6D1376)
300. Khomenko, A.V., N.N. Kovalev, and M.P. Petrov (0). Optical recording of information in a PROM structure based on $\text{Bi}_{12}\text{SiO}_{20}$. ZhTF P, no. 23, 1976, 1095-1098. (RZhF, 5/77, 5D1259)
301. Korbukov, G.Ye., V.V. Kulikov, and Ye.R. Tsvetov (0). Optical heterodyne method for correlation processing of images. IN: Sb 5, 51-68. (RZhF, 6/77, 6D1331)
302. Malina, V., M. Chomat, and I. Zaruba (NS). Manufacture and properties of a silicon photodiode matrix for holographic memories. Slaboproudy obzor, no. 12, 1976, 572-577. (RZhRadiot, 6/77, 6Ye388)
303. Muratkov, K.L., and B.G. Podlaskin (4). Study of the transient process of the elementary cell in photodetecting matrices and scanistors during switching. ZhTF, no. 6, 1977, 1282-1289.
304. Ostrovskiy, A.S., I.N. Rallev, and I.M. Pochernyayev (0). Coherent optical methods for correlation analysis of random processes. IN: Sb 5, 134-140. (RZhF, 6/77, 6D972)
305. Sorokin, G.I., V.Ye. Sazanov, and I.M. Pochernyayev (0). Contact photothermoplastic recording in a coherent optical information processing system. IN: Sb 5, 157-165. (RZhF, 6/77, 6D974)

306. Sosov, Yu.M., N.K. Yushin, and A.Yu. Kudzin (4). High-frequency acoustooptic properties of paratellurite crystals: an efficient material for optical information processing devices. ZhTF P, no. 10, 1977, 475-479.
307. Tsukerman, V.G. (0). Recording of optical information in chalcogenide glassy semiconductors. Cited in ZhNiPFIK, no. 3, 1977, 236.
- E. HOLOGRAPHY
308. Abakumov, B.M., N.D. Baykova, L.N. Gnatyuk, M.L. Gurari, Yu.K. Ibayev, S.N. Marchenko, G.I. Rukman, and B.M. Stepanov (0). Recording holograms of diffusely scattering objects on MnBi magnetic tape. IT, no. 6, 1977, 37-39.
309. All-Union Scientific Research Institute of Motion Pictures and Photography. Filming and projection of three-dimensional holographic motion picture images. TKiT, no. 5, 1977, 3-5.
310. Barkhudarov, E.M., V.R. Berezovskiy, G.V. Gelashvili, M.I. Taktakishvili, T.Ya. Chelidze, and V.V. Chichinadze (0). Holography in the 10.6 μ region and possibility of using it for plasma diagnostics. ZhTF P, no. 23, 1976, 1079-1083. (RZhF, 5/77, 5D1091)
311. Bayda, L.I., Yu.V. Barsukov, Ye.I. Kachanov, and Ye.M. Yarichin (0). Some problems in the theory of tolerances of multichannel electron systems for acoustic holography. IN: Sb 10, 108-118. (RZhRadiot, 5/77, 5Ye446)

312. Bogomolov, K.S., E.A. Gruz, E.F. Klimzo, I.I. Kononenko, and K.M. Romanovskaya (96). PL-2 photoplates for holographic recording of an image. ZhNiPFIK, no. 3, 1977, 227-228.
313. Butusov, M.M. (0). Some problems of holographic optics (development and application). IN: Sb 7, 185-201. (RZhF, 6/77, 6D1308)
314. Davydova, I.N. (0). Properties of aspectograms obtained by means of a hexagonal lens raster. ZhTF, no. 6, 1977, 1276-1281.
315. Demidenko, Z.A. (5). Some characteristics of resonant two-photon absorption in semiconductors. UFZh, no. 5, 1977, 770-777.
316. Deryugin, I.A. (0). Physical essence of the holographic process. IN: Sb 7, 7-45. (RZhRadiot, 5/77, 5Ye435)
317. Ginzburg, V.M., and V.M. Meshchankin (0). Basic steps in the radio-holographic process. IN: Sb 10, 4-23. (RZhRadiot, 5/77, 5Ye440)
318. Greysukh, G.I., M.A. Prokhorov, and Yu.G. Turkevich (0). Calculation criteria for evaluating the quality of holographic optical elements. OIS, v. 42, no. 6, 1977, 1162-1164.
319. Guether, R., and S. Kusch (NS). Potentialities of optical information in the far field using three-dimensional holograms. KE, no. 6, 1977, 1208-1214.
320. Gurevich, S.B., N.N. Il'yashenko, B.T. Kolomiyets, V.M. Lyubin, and A.B. Suslov (4). Increasing the diffraction efficiency of holograms recorded on glassy chalcogenide semiconductor films, with readout in infrared light. ZhTF, no. 6, 1977, 1338-1341.

321. Gurevich, S.B. (0). Sensitivity of holographic systems. IN: Sb 5, 30-37. (RZhF, 6/77, 6D1293)
322. Gurevich, S.B., N.N. Il'yashenko, B.T. Kolomiyets, V.M. Lyubin, V.A. Fedorov, and V.P. Shilo (0). Holographic recording media based on chalcogenide glassy semiconductor films of an Se-As system. IN: Sb 5, 146-157. (RZhF, 6/77, 6D1303)
323. Hamori, A., and Gy.L. Bencze (NS). Experiments to improve the accuracy of holographic correlators. Kozponti fizikai kutate intezet (Publs), no. 73, 1976, 18 p. (RZhF, 6/77, 6D1336)
324. Hase, W. (NS). Method for recording binary Fourier holograms. Patent GDR, no. 119492, issued 20 April 1976. (RZhRadiot, 5/77, 5Ye464)
325. Ivakin, Ye.V., I.S. Klimenko, A.S. Rubanov, and G.V. Skrotskiy (0). Eighth All-Union Seminar on Coherent Optics and Holography, Minsk, 9-17 February 1976. ZhPS, v. 26, no. 1, 1977, 182.
326. Ivanova, G.K., V.N. Il'ina, and Ye.F. Orlov (0). Processing of two-dimensional signals and images by noncoherent optical systems. IN: Sb 5, 165-183. (RZhF, 6/77, 6D1332)
327. Janowska, B., and J. Szydłowska (NS). Recording of color images in thin holographic emulsions. Optica applicata [Poland], no. 3-4, 1976, 75-77. (RZhF, 5/77, 5D1093)
328. Karnatovskiy, V.Ye., and V.G. Tsukerman (75). The possibility of temperature regulation of the properties of holograms in media based on chalcogenide glassy semiconductors. KE, no. 6, 1977, 1296-1300.

329. Klimenko, I.S. (0). Holography in multimode laser radiation.
IN: Sb 7, 247-259. (RZhF, 6/77, 6D1287)
330. Klykovskiy, O.V., and V.G. Prokhorov (0). Forming a focused image in acoustic holography. IN: Sb 10, 128-141.
331. Klyuchnikov, A.S., and V.P. Sidorovich (0). Hologram formation and field display in the SHF range. IN: Sb 10, 23-35.
332. Kondratenko, A.M., and A.N. Skrinskiy (79). X-ray holography of microscopic objects. Institut yadernoy fiziki SOAN. Preprint, IYaF 76-105, Novosibirsk, 1976, 27 p. (RZhF, 6/77, 6D1306)
333. Korbukov, G.Ye., E.I. Krupitskiy, and V.V. Kulikov (90). Two-stage holographic rejection filter. IVUZ Radiofiz, no. 5, 1977, 705-711.
334. Kostylev, G.D. (0). Possibility of recording holograms in opposed beams during spatially noncoherent illumination of an object. ZhTF P, no. 23, 1976, 1086-1090. (RZhF, 5/77, 5D1089)
335. Kostyshin, M.T., K.S. Mustafin, P.F. Romanenko, and V.A. Seleznev (6). Some characteristics of light-sensitive semiconductor-metal systems and holographic gratings obtained on their basis. KE, no. 5, 1977, 1071-1075.
336. Kreibich, E., G. Liebmann, and G. Rockstroh (NS). Properties of images in Fourier holograms. Journal Signalaufzeichnungsmaterialien, v. 4, no. 5, 1976, 345-353. (RZhF, 6/77, 6D1286)

337. Kukhtarev, N.V. (0). Kinetics of recording and erasing holograms in electrooptic crystals. ZhTF P, no. 24, 19-6, 1114-1119. (RZhF, 5/77, 5D1095)
338. Kurashov, V.N. (0). Phase measurements in quantum optics and holography. IN: Sb 7, 130-146. (RZhF, 6/77, 6D1280)
339. Kuz'menko, A.V. (0). Principle of pulse-code modulation for synthesizing binary digital holograms. OiS, v. 42, 1977, 973.
340. Lebedev, D.S., O.P. Milyukova, and A.V. Trushkin (0). Reconstructing blurred images by a pseudo-inversion method. IN: Sb 5, 75-80. (RZhRadiot, 6/77, 6Ye360)
341. Levina, P.I., R.M. Sobol', and V.A. Veydenbakh (0). Effect of antifogging substances in a pyrogallol-ammonia developer on the diffraction efficiency of holograms. ZhNiPFiK, no. 3, 1977, 223-225.
342. Merzlyakov, N.S., and L.P. Yaroslavskiy (201). Simulating bright spots on diffuse surfaces of objects by using a programmed diffuser. ZhTF, no. 6, 1977, 1263-1269.
343. Nalimov, I.P. (0). Stereo holography. IN: Sb 7, 307-331. (RZhF, 6/77, 6D1281)
344. Nalimov, I.P. (0). Ninth All-Union Seminar on Holography, Tbilisi, 24-31 January 1977. TKiT, no. 5, 1977, 91-92.
345. Nemtinov, V.B. (0). Group structure of a holographic process. IN: Sb 7, 57-86. (RZhF, 6/77, 6D1279)

346. Nikitin, V.V., G.I. Semenov, and V.F. Tolstov (1). Lensless reconstruction of Fourier holograms by injection laser radiation.
KE, no. 5, 1977, 1141-1143.
347. Ovechkis, Yu.N., and A.Kh. Shakirov (231). Simplified system for recording reflecting holograms. IN: Tr 7, 19-20. (RZhF, 6/77, 6D1297)
348. Popov, S.A., B.A. Rozanov, Yu.S. Zinov'yev, and A.Ya. Pasmurov (0). Basic principles of reversed synthesis of radioholograms.
IN: Sb 7, 275-297. (RZhRadiot, 5/77, 5Ye442)
349. Rakhmanov, S.K., V.P. Mikhaylov, G.A. Branitskiy, and V.V. Sviridov (87). Recording holograms on sputtered layers of Cu-PbI₂ using a silver effect.
ZhTF P, no. 12, 1977, 559-561.
350. Rozhkov, O.V. (0). Maximum attainable quality of a holographic image.
IN: Sb 7, 105-129. (RZhF, 6/77, 6D1288)
351. Ruske, R. (NS). Holographic recording media. Potsdammer Forschungen, v. B, no. 7, 1976, 200-207. (RZhF, 6/77, 6D1302)
352. Rykhlov, A.F., M.S. Cheberyak, and D.F. Chernykh (0). Effect of a diffuser on the properties of a Fresnel hologram. IN: Sb 5, 183-191.
(RZhF, 6/77, 6D1289)
353. Schulz, G. (NS). Holographic image of a spatial object. Potsdammer Forschungen, v. B, no. 7, 1976, 229-231. (RZhF, 6/77, 6D1310)
354. Shenderov, Ye.L. (0). Forming acoustic images in a phase holographic system. IN: Sb 10, 119-127.

355. Sidorovich, V.G. (0). Theory of converting optical fields by three-dimensional amplitude holograms recorded in amplifying media. OIS, v. 42, 1977, 693.
356. Smolovich, A.M. (231). Method for recording holograms by expanding a photoemulsion layer. IN: Tr 7, 21-24. (RZhF, 6/77, 6D1299)
357. Spolaczyk, R. (NS). Dichromate gelatin as a recording material for three-dimensional holography. Journal Signalaufzeichnungsmaterialen, v. 4, no. 5, 1976, 321-331. (RZhF, 5/77, 5D1092)
358. Tsyru'nikov, D.A. (0). Holograms with a broad spectral composition in the reconstructed image. IN: Sb 7, 147-181. (RZhF, 6/77, 6D1282)
359. Valiyev, K.A., V.G. Mokerov, A.G. Petrova, A.V. Rakov, and I.M. Zakoteyeva (0). Dynamic holograms on vanadium dioxide films. ZhTF P, no. 24, 1976, 1119-1123. (RZhF, 6/77, 6D1294)
360. Vinetskiy, V.L., N.V. Kukhtarev, S.G. Odulov, and M.S. Soskin (5). Dynamic conversion of optical beams by shift holograms in free carriers. ZhTF, no. 6, 1977, 1270-1275.
361. Vinetskiy, V.L., N.V. Kukhtarev, V.D. Markov, S.G. Odulov, and M.S. Soskin (5). Mechanisms for recording holograms in crystals and amplification of coherent optical beams. Institut fiziki AN UkrSSR. Preprint, no. 15, 1976, 41 p. (RZhF, 6/77, 6D1301)
362. Vlasov, N.G. (0). Conditions for transferring holographic information on objects, their correlation properties, and the coherence of wave fields. IN: Sb 7, 87-104. (RZhF, 6/77, 6D1290)

363. Zeylikovich, I.S., N.M. Spornik, and A.P. Ovechkin (0). Tuning an interference pattern by means of two separate holograms. OIS, v. 42, 1977, 968.

364. Zhiglinskiy, A.G., G.G. Kund, and A.O. Morozov (0). Holographic method for determining the spatial coherence of radiation from light sources with low brightness. OIS, v. 42, no. 6, 1977, 1158-1161.

F. LASER-INDUCED CHEMICAL REACTIONS

365. Aleksandrov, A.P., V.N. Genkin, M.S. Kitay, I.M. Smirnova, and V.V. Sokolov (8). Polymerization kinetics and molecular-weight distribution of a polymer under laser initiation. KE, no. 5, 1977, 976-981.

366. Alimpiyev, S.S., V.N. Bagratashvili, N.V. Karlov, V.S. Letokhov, V.V. Lobko, A.A. Makarov, B.G. Sartakov, and E.M. Khokhlov (1,72). Effect of the annihilation of many rotational states during the vibrational excitation of molecules in an intense IR field. ZhETF P, v. 25, no. 12, 1977, 582-585.

367. Borovkova, V.A., and Kh.S. Bagdasar'yan (92). Two-quantum photoionization in a liquid solution. Quantitative analysis by nanosecond photolysis. DAN SSSR, v. 235, no. 1, 1977, 132-135.

368. Bykova, T.T., E.F. Lazneva, and A.F. Tavasiyev (0). Desorption of oxygen from surface layers of CdSe stimulated by laser radiation. ZhTF P, no. 10, 1977, 467-471.

369. Chesnokov, Ye.N., and V.N. Panfilov (295). Using a double resonance method to study the processes of the transfer of vibrational energy between molecules of CH₃F and CH₄. ZhETF, v. 72, no. 5, 1977, 1694-1701.
370. Devdariani, A.Z., and A.N. Klyucharev (0). Photoionization of excited states of cesium. OIS, v. 42, no. 6, 1977, 1204-1205.
371. D'yachenko, N.G., A.V. Tyurin, V.Ye. Mandel', A.S. Sheveleva, A.B. Gol'denberg, and V.V. Golubtsov (0). Photochromic processes in alkali-halide metal crystals with impurities. Cited in ZhNiPFIK, no. 3, 1977, 236.
372. Gordiyets, B.F., A.I. Osipov, and V.Ya. Panchenko (2,1). Isotope separation in collisional chemical reactions, using selective excitation of molecule vibrations in a gas by laser radiation. DAN SSSR, v. 234, no. 6, 1977, 1302-1305.
373. Karlov, N.V., B.B. Krynetskiy, V.A. Mishin, and A.M. Prokhorov (1). Measuring the cross-section of excitation transfer in a pure atomic gas by laser spectroscopy. ZhETF P, v. 25, no. 11, 1977, 535-537.
374. Orayevskiy, A.N., N.B. Rodionov, A.A. Stepanov, and V.A. Shcheglov (1). Using the nonresonant vibrational exchange effect to separate isotopes in chemical reactions triggered by infrared laser radiation. KhVE, no. 3, 1977, 269-274.

375. Polivanov, Yu.N., R.Sh. Sayakov, and A.T. Sukhodol'skiy (1).
Possibility of separating direct and cascade processes in active spectroscopy of Raman scattering by polaritons. KSpF, no. 12, 1976, 16-22. (RZhF, 6/77, 6D1115)
376. Pyatosin, V.Ye., A.N. Sevchenko, K.N. Solov'yev, and M.P. Tsvirko (334,3).
Bleaching of rare-earth-ion phthalocyanine complexes under the action of a ruby laser. DAN SSSR, v. 234, no. 3, 1977, 578-581.
377. Shigorin, D.N., and V.G. Plotnikov (92). Classification of molecules by their spectral-luminescent properties. DAN SSSR, v. 234, no. 1, 1977, 121-124.
378. Strunin, V.P., N.K. Serdyuk, and V.N. Panfilov (295). Effect of CO₂ laser radiation on the isotopic effect in the bromination of methyl fluoride. DAN SSSR, v. 234, no. 6, 1977, 1395-1397.
379. Sveshnikova, L.L., V.I. Donin, and S.M. Repinskiy (10). Triggering an interreaction of bromine with silicon by high-power argon laser radiation. ZhTF P, no. 12, 1977, 547-549.
380. Vilesov, F.I., (0). Results of the Fourth All-Union Conference on Spectroscopy in the Vacuum Ultraviolet and on the Interaction of Radiation with Matter. IN: Sb 11, 163-169. (RZhF, 6/77, 6D310)
381. Vostrikov, A.A., Yu.S. Kusner, and A.K. Rebrov (159). Interaction of a rotationally excited and unexcited CO₂ molecular beam with a cooled surface. ZhTF P, no. 11, 1977, 489-493.

G. MEASUREMENT OF LASER PARAMETERS

382. Belousov, G.F., I.N. Govor, Yu.A. Kalinin, A.V. Kubarev, Ye.I. Kuramin, A.S. Obukhov, and V.M. Russov (0). Introducing scientific developments into serial production and improving metrological control for measuring laser energy parameters. IT, no. 4, 1977, 19-20.
383. Chirkin, A.S. (0). Limit spatial coherence of gas laser beams.
IN: Sb 7, 260-272. (RZhF, 6/77, 6D1258)
384. Danileyko, M.V., T.V. Rozhdestvenskaya, and V.P. Fedin (5). Measurement of the frequency characteristics of Doppler line broadening in laser amplification. PTE, no. 2, 1977, 189-190.
385. Didyk, L.A., V.D. Kukush, O.Ye. Marykivskiy, A.I. Teslenko, and V.S. Solov'yev (0). Liquid meter for measuring laser pulse energy.
IN: Sb 12, 118-120.
386. Didyk, L.A., and V.D. Kukush (0). Using a free plunger in a liquid calorimeter for measuring laser energy. IN: Sb 12, 121-125.
387. Domnin, Yu.S., V.M. Tatarenkov, and P.S. Shumyatskiy (140).
Improving the accuracy of measurements of HC and D₂O laser frequencies.
IN: Tr 8, 87-91. (RZhRadiot, 5/77, 5Ye310)
388. Dubkov, V.I. (7). Photo-shift method in spectral analysis of laser radiation. OMP, no. 6, 1977, 59-64.
389. Grassme, W., and U.Lorenz (NS). Reproducibility of the radiation parameter of solid-state lasers in a pulsed regime. Feingeratetechnik, no. 1, 1977, 18-22. (RZhRadiot, 6/77, 6Ye353)

390. Pakhalov, V.B., and A.S. Chirkin (2). Phase transition during formation of spatially-coherent laser beams. KE, no. 6, 1977, 1268-1275.
391. Solyanik, A.S., and P.A. Shpan'on (163). Applicability of a method for measuring frequency deviation by an electronic counting frequency meter for converted frequency-modulated laser radiation. IN: Tr 9, 51-60.
392. Vorontsov, S.S. (0). Using instruments with an optomechanical image-scanning system in gasdynamic studies. IN: Sb 4, 201-202.
(RZhF, 6/77, 6D1573)
393. Wilhelmi, B. (NS). Photokinetic studies of ultrashort pulses.
Potsdammer Forshungen, v. B, no. 7, 1976, 247-253. (RZhF, 6/77, 6D1252)
394. Zaytsev, L.M., V.M. Klyuchinkov, A.S. Sonin, B.M. Stepanov, and M.I. Epshteyn (141). Large-screen display device. KE, no. 6, 1977, 1351-1353.

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

395. Afonin, Ye.I., and V.A. Basharin (0). Using a loaded laser nephelometer to study the statistical characteristics of light scattered by a marine hydrosol. IN: Sb 13, 132-138.
396. Akimov, A.V., S.A. Basun, A.A. Kaplyanskiy, V.A. Rachin, and R.A. Titov (4). Direct observation of the focusing of acoustic phonons in ruby crystals. ZhETF P, v. 25, no. 10, 1977, 491-495.

397. Alekseyev, V.A., and L.P. Yatsenko (1). Limit characteristics of resonances in high-power ring lasers. IN: Tr 1, 147-158.
398. Alekseyev, V.A., and A.V. Malyugin (1). Effect of the intensity of a field on the line shift of an optical frequency standard. Fizicheskiy institut AN SSSR. Laboratoriya kvantovoy radiofiziki. Kvantovaya radiofizika. Preprint, no. 162, 1976, 32 p. (RZhF, 6/77, 6D1107)
399. Aleynikov, A.K., V.N. Okunishnikov, G.M. Sobstel', A.A. Franchuk, and V.P. Shevchenko (0). Intermediate converters for determining the parameters of turbulent flows. IN: Sb 9, 119-120. (RZhMekh, 5/77, 5B1289)
400. Al'kayev, M.I., V.M. Vedernikov, and A.M. Shcherbachenko (0). Programmed control modules for an interference coordinate-measuring system in the "Zenit" automatic photogrammetric device. Avtometriya, no. 3, 1977, 24-33.
401. Andronova, I.A., and Ye.A. Kuvatova (8). The effect of a longitudinal magnetic field on nonmutual effects in a ring laser. KE, no. 6, 1977, 1227-1236.
402. Aristov, Ye.M., and B.S. Taratorkin (0). Study of the metrological characteristics of modern laser flowmeters. IT, no. 6, 1977, 39-41.
403. Arkhipov, V.I., and L.A. Maslov (0). Experimental study on the dynamics of brittle-fracture propagation. ZhPMTF, no. 3, 1977, 137-141.
404. Artyukh, Yu.N. (0). Converter for frequency-time measurements in laser Doppler velocimeter systems. IN: Sb 9, 21-23. (RZhMekh, 5/77, 5B1270)

405. Arzumtsyan, A.G., K.A. Yeghyan, Yu.V. Yesayan, and R.K. Ovsepyan (0). Study of the characteristics of optical switching in various amorphous semiconductor films. FTP, no. 5, 1977, 967-969.
406. Bakhrakh, L.D., S.G. Rudneva, O.B. Ovezov, and V.B. Shverin-Kashin (0). Correcting SHF and optical antennas by means of ultrasonic modulators and holographic filters. IN: Sb 10, 69-85.
407. Baltrameynas, R., Yu. Vaytkus, D. Veletskas, and V. Grivitskas (49). Kinetics of light-induced change in the optical properties of Si during excitation by ultrashort Ne laser pulses. FTP, no. 6, 1977, 1159-1161.
408. Barill, G.A., P.Ya. Belousov, Yu.G. Vasilenko, Yu.N. Dubnishchev, A.I. Zhilevskiy, F.A. Zhuravel', V.P. Koronkevich, V.S. Sobolev, A.A. Stolpovskiy, Ye.N. Utkin, and N.F. Shmoylov (0). Modern laser Doppler velocimeters (problems of theory and practical application). IN: Sb 9, 5-6. (RZhMekh, 5/77, 5B1266)
409. Belokrinitskiy, N.S., L.A. Kernazhitskiy, V.I. Romanenko, and M.T. Shpak (5). Radiative recombination of chlorine in incident shock waves. UFZh, no. 6, 1977, 909-914.
410. Berezina, S.I., V.Ye. Lyamov, and I.Yu. Solodov (2). Acoustic microscopy. VMU, no. 1, 1977, 3-18.
411. Bunkin, A.F., S.G. Ivanov, and N.I. Koroteyev (2). Gas analysis by means of polarized coherent active spectroscopy of Raman scattering. ZhTF P, no. 10, 1977, 450-455.

412. Burkovskiy, S.I. (418). Equipment for studying light scattering by aqueous solutions at high temperatures and pressures. PTE, no. 3, 1977, 194-195.
413. Danileyko, M.V., N.K. Danilov, and V.R. Kozubovskiy (5). Competition of orthogonally polarized modes in a ring laser with nonlinear absorption. KE, no. 5, 1977, 1109-1111.
414. Danileyko, M.V., V.R. Kozubovskiy, A.P. Nedavniy, and M.T. Shpak (0). Power resonances of a dual-mode ring laser. OIS, v. 42, no. 1977, 752.
415. Dmitriyev, G.A., and M.A. Kropotkin (110). Detecting-recording systems for oil pollution lidars. IN: Tr 10, 96-103. (RZhRadiot, 5/77, 5Ye376)
416. Dotsenko, A.V., and Ye.G. Lariontsev (98). Beat regime in a solid state ring laser. KE, no. 5, 1977, 1099-1103.
417. Ganin, V.M., and V.M. Lyubin (4). Photostimulated change in the properties of chalcogenide glassy semiconductors. FTP, no. 6, 1977, 1206-1208.
418. Gaydachuk, B.Ye., A.A. Kapustin, and A.A. Rossokha (0). Speckle interferometry method for studying stress concentration in compound materials. IN: Sb 7, 234-244. (RZhF, 6/77, 6D1283)
419. Gershenson, Ye.M. (0). Spectral and radiospectroscopic studies of semiconductors in the submillimeter range. UFN, v. 122, no. 1, 1977, 164-174.
420. Geruni, P.M., and Dzh.S. Arutyunyan (0). Radioholography and modern methods of antenna measurements. IN: Sb 10, 85-98.

421. Gol'berg, I.Ye., D.B. Zimin, G.Ye. Korbukov, A.P. Kurochkin, and Ye.G. Sedenkov (0). Apparatus for determining the parameters of antennas by holographic methods. IN: Sb 10, 54-69.
422. Golovanevskiy, E.I., and V.N. Charnetskiy (111). Laser technology in mining. IN: Tr 11, 108-114.
423. Gural', T.I., O.A. Yershov, A.G. Sorits, and B.A. Fomenko (0). Holographic interferometry in studies of turbulence. IN: Sb 9, 26-28. (RZhMekh, 5/77, 5B1306)
424. Ivannikov, Yu.A., N.S. Kruchinin, V.P. Mayorov, A.K. Movshev, V.N. Nekuryashchev, V.I. Nikulin, V.S. Pegov, and V.I. Khalimonov (0). Industrial design of a universal automatic positioning system for recording and readout of optical information. Avtometriya, no. 3, 1977, 46-51.
425. Janowska, B., and J. Szydłowska (NS). Analysis of quartz crystal vibration by a holographic method. Optica applicata [Poland], no. 3-4, 1976, 49-52. (RZhF, 5/77, 5D1104)
426. Kol'tsov, V.V., and T.M. Khazanova (394). Photometric methods and apparatus for remote study of the sea. IN: Tr 12, 148-155.
427. Krsek, J., and F. Rados (NS). Adjustable mount for a beam splitter in a laser interferometer. Patent Czechoslovakia, no. 160199, issued 15 September 1975. (RZhRadiot, 6/77, 6Ye246)
428. Kuniskiy, A.S. (0). Three-dimensional reconstruction of biological specimens. IN: Sb 5, 89-96. (RZhF, 6/77, 6D1347)

429. Kuznetsov, M.I., and N.P. Vinogradskaya (0). Analyzing the errors in measuring flow velocities by transit time and Doppler methods. IN: Sb 9, 175-177. (RZhMekh, 5/77, 5B1299)
430. Lazenias, G-L.B., Yu-R.Yu. Mikutskis, and K.P. Monkus (0). Special measuring instruments developed by a metrological service plant. IT, no. 5, 1977, 13-18.
431. Lebedev, A.A., P.N. Metlinskiy, Yu.V. Rud', and V.G. Tyrziu (4,415). Anisotropic photoconductivity of HgGa_2Se_4 single crystals. FTP, no. 6, 1977, 1038-1042.
432. Lenk, H. (NS). Holographic methods in measuring and control technology. Potsdammer Forschungen, v. B, no. 7, 1976, 148-153. (RZhF, 6/77, 6D1309)
433. Lipkin, A.S. (0). Possibilities of using holographic and speckle interferometric methods to study the deformation state of samples and models consisting of equivalent materials. IN: Sb 7, 222-233. (RZhF, 6/77, 6D1313)
434. Lipkin, A.S., and A.S. Bogomolov (0). Holographic defectoscopy. IN: Sb 7, 332-340. (RZhF, 6/77, 6D1312)
435. Malykh, N.I., A.G. Nagornyy, and Ye.S. Yampol'skiy (0). A three-mirror HCN laser interferometer with phase measurement at the intermediate frequency. PTE, no. 3, 1977, 186-187.
436. Markelov, N.A., I.I. Matorin, and Ya.I. Khanin (8). Experimental research on competition of opposed waves in a gas ring laser with powerful pumping. KE, no. 5, 1977, 1135-1138.

437. Miller, V.S. (422). Thermophysical studies of optical inhomogeneities in transparent media, using an IT-14 interferometer with a laser light source. IN: Sb 14, 71-75.
438. Motsnyy, F.V., S.S. Ishchenko, S.M. Okulov, and D.I. Bletskan (6). Nature of infrared photoluminescence and the character of doped layered BiI₃ single crystals. FTP, no. 6, 1977, 1043-1048.
439. Orlov, V.V. (0). Statistical limits to the accuracy of measuring velocity by visualization methods. IN: Sb 9, 44-45. (RZhMekh, 5/77, 5B1275)
440. Pachuta, S., R. Koscielowski, and E. Pocięcha (NS). The TEO LAS KP-5 laser theodolite [of Poland]. Przegląd geodezyjny, v. 48, no. 9, 1976, 383-387. (RZhGeod, 5/77, 5.52.319)
441. Petru, F. (NS). Method and device for obtaining an alternating current signal at the output of a laser interferometer. Author's certificate Czechoslovakia, no. 158869, issued 15 July 1975. (RZhRadiot, 5/77, 5Ye391)
442. Rud', Yu.V., and I.A. Mal'tseva (4). Anisotropy of the luminescent properties of ZnSnP₂. FTP, no. 6, 1977, 1033-1037.
443. Sardyko, V.I., and V.N. Severikov (0). Study of the properties of ring resonators with coupling of opposed directions across back reflection. ZhPS, v. 26, no. 5, 1977, 826-833.
444. Sazhin, S.M., V.A. Kriul'kov, P.P. Zaytsev, and S.Ya. Goncharenko (404). Reflectance of oil films in the far UV. IN: Tr 13, 90-96.

445. Stefanov, S.R. (0). Using optical recording of ultrasonic waves to measure small-scale turbulence. IN: Sb 9, 39-41. (RZhMekh, 5/77, 5B1273)
446. Sviridenkov, E.A., and M.P. Frolov (1). Possible investigation of the shape of an absorption line using intracavity laser electroscopy. KE, no. 5, 1977, 1028-1033.
447. Svitashov, K.K., L.V. Semenenko, A.G. Sharshunov, and A.I. Feoktistov (0). Study of epitaxial layers of silicon in a laser IR ellipsometer. Mikroelektronika, no. 3, 1977, 258-262.
448. Tyagay, V.A., O.V. Snitko, N.A. Rastrenenko, V.V. Milenin, V.I. Poludin, and V.Ye. Primachenko (6). Ellipsometric study of the surface of silver-doped silicon. FTP, no. 6, 1977, 1026-1032.
449. Vayner, Yu.G., G.A. Gospodinov, L.P. Malyavkin, K.I. Os'minkina, and E.G. Sil'kis (0). Characteristics of a television isocon tube as an element in a system for measuring extremely weak optical images. ZhPS, v. 26, no. 5, 1977, 919-922.
450. Vlasov, N.G., E.G. Semenov, and Yu.P. Presnyakov (0). Method for monitoring the size and shape of objects. Author's certificate USSR, no. 470699, issued 23 October 1975. (RZhRadiot, 6/77, 6Ye362)
451. Vlasov, N.G., and A.Ye. Shtan'ko (0). Some problems of holographic interferometry. IN: Sb 7, 202-213. (RZhF, 6/77, 6D1311)
452. Volkov, I.V. (0). Using holographic interferometry to record deformation components of aircraft design. IN: Sb 7, 214-221. (RZhF, 6/77, 6D1318)

453. Vorontsov, M.A., and V.I. Shmal'gauzen (2). Active compensation of noise in a Michelson interferometer. VMU, no. 2, 1977, 67-73.
454. Vorontsova, L.A., and G.P. Cheydo (0). Mathematical analysis of the "Zenit" automatic photogrammetric device. Avtometriya, no. 3, 1977, 52-57.
455. Wrembel, H.Z. (NS). Using a laser for depth sounding. Optica applicata [Poland], no. 3-4, 1976, 13-25.
456. Wroz, T. (NS). Angular dependence of Rayleigh light scattering measured with an He-Ne gas laser. Optica applicata [Poland], no. 3-4, 1976, 3-11. (RZhRadiot, 6/77, 6Ye265)
457. Yermakov, O.N., R.S. Ignatkina, V.P. Sushkov, and M.V. Chukichev (0). Luminescent properties of $(0.6 \leq x \leq 0.7)$ $\text{In}_{1-x}\text{Ga}_x\text{P}$ layers obtained by liquid epitaxy on $\text{GaAs}_{1-y}\text{P}_y$ substrates. FTP, no. 6, 1977, 1102-1107.
458. Yevseyev, A.R. (0). Multichannel laser Doppler velocimeter. IN: Sb 9, 24-25. (RZhMekh, 5/77, 5B1271)
459. Zarutskiy, M.A., A.I. Priklonskiy, V.V. Trofimovskiy, and D.M. Babel'skiy (177). Using a stroboscopic method to detect fatigue fractures in turbine blades of gas-turbine engines. ZhTF, no. 5, 1977, 1072-1073.
460. Zarutskiy, M.A. (177). Problem of detecting fractures by means of holographic interferometry. ZhTF, no. 5, 1977, 1073-1075.

2. Laser-Excited Optical Effects

461. Ablova, M.S., A.A. Andreyev, Yu.M. Grekhov, A.A. Tundyrev, A.B. Pevtsov, V.A. Trepakov, and N.I. Shadeyev (4). Recording an image on the basis of the photoinduced electrooptic effect in $\text{Bi}_{12}\text{GeO}_{20}$ crystals. ZhTF P, no. 12, 1977, 537-540.
462. Aleksandrov, Ye.B., V.K. Prilipko, and K. Khartung (0). Studying the structure of $5d[{}^7/2]3.4 \rightarrow 6p[{}^5/2]2,3$ transitions in xenon by the method of laser spectroscopy and double resonance. Ois, v. 42, 1977, 609.
463. Basova, T.A., Yu.A. Bykovskiy, V.V. Gorshkov, V.G. Degtyarev, I.D. Laptev, and V.N. Nevolin (16). Laser-plasma source of ions. Otkr izobr, no. 21, 1977, 511752.
464. Bazarskiy, O.V., A.I. Kolesnikov, and Ya.L. Khlyavich (0). Selecting a raster for nonoptical holograms. RiE, no. 6, 1977, 1276-1277.
465. Belik, V.P., S.V. Bobashev, and L.A. Shmayenok (4). Photoionization of helium from the $4p^1P_1$ excited state. ZhETF P, v. 25, no. 11, 527-530.
466. Belyayev, L.M., B.N. Grechushnikov, G.F. Dobrzhanskiy, N.N. Dymenko, Yu.N. Martyshev, Z.B. Perekalina, and M.S. Smorodina (13). Study on the character of the entry of impurity ions of the iron group into an $\alpha\text{-LiIO}_3$ crystal, using optical absorption spectra. Kristal, no. 3, 1977, 650-652.
467. Benedichuk, I.V., and Yu.S. Ivanov (144). Precision polygonal mirrors in optomechanical scanning. TKiT, no. 5, 1977, 60-64.

468. Bonch-Bruyevich, A.M., S.G. Przhibel'skiy, and V.V. Khromov (0). Inelastic processes of light scattering in alkali metal vapors. Molecular fluorescence. ZhETF, v. 72, no. 5, 1977, 1738-1748.
469. Bragina, T.M., K.P. Konin, and Yu.G. Shreter (4). Appearance of a plasma in a system of electron-hole droplets in germanium at a high level of excitation. FTT, no. 6, 1977, 1872-1874.
470. Cuchy, Z., O. Fisera, and M. Zadrazil (NS). Testing optical elements by a Twyman-Green interferometer of original design. Jemna mechanika a optika, no. 1, 1977, 3-8. (RZhF, 6/77, 6D1534)
471. Dianov, Ye.M., A.Ya. Karasik, and I.A. Shcherbakov (1). Selective excitation of activator centers in condensed media by nonlinear spectral line broadening. KE, no. 5, 1977, 1050-1055.
472. Gayday, Yu.A., I.I. Kondilenko, V.I. Maystrenko, and A.A. Solomko (51). Diffraction of laser radiation by parametrically excited elastic and magnetoelastic waves. FTT, no. 5, 1977, 1469-1471.
473. Golovyanko, A.A., B.N. Dikarev, R.G. Romanets, and V.G. Bobyl' (423). Determining the Kerr constant and distribution of an electrical field in dielectrics. UFZh, no. 5, 1977, 861-863.
474. Golubev, V.G., V.I. Ivanov-Omskiy, and G.I. Kropotov (4). Quantum oscillations of μ -photoconductivity in $\text{Cd}_{1-x}\text{Hg}_x\text{Te}$. ZhTF P, no. 12, 1977, 529-532.

475. Gorban', I.S., A.G. Bychkov, L.M. Gorynya, V.A. Gorynya, D.N. Karlikov, A.P. Makovetskaya, I.I. Tychina, and V.G. Fedotov (0). Dispersion of birefringence in ZnP_2 crystals. ZhPS, v. 26, no. 6, 1977, 1128-1130.
476. Gorelik, V.S., and A.A. Khalezov (1). Law of dispersion of polaritons and temperature dependence of the index of refraction in the infrared in $LiNbO_3$.
477. Grushevskiy, V.B., M.Ya. Tamanis, R.S. Ferber, and O.A. Shmit (0). Relaxation of K_2 molecules optically pumped by He-Ne laser radiation during collisions with atoms. Ois, v. 42, 1977, 993.
478. Kaminskaya, E.G., S.S. Gitis, and A.Ya. Kaminskiy (0). Raman spectra of σ -complexes of aromatic polynitro compounds with alcoholates. ZhPS, v. 26, no. 6, 1977, 1053-1058.
479. Kharlamov, B.M., L.A. Bykovskaya, and R.I. Personov (0). Obtaining fine-structure absorption spectra of organic molecules in solid solutions by a method of laser burning of "gaps". Ois, v. 42, 1977, 775.
480. Kovalev, A.A., L.V. Syt'ko, I.P. Mazur, G.L. Nekrasov, and V.A. Grozhik (299). Stimulated tuning of the domain structure in nematic liquid crystals. Kristal, no. 3, 1977, 586-591.
481. Krylov, K.I., S.A. Ashurbekov, and A.S. Mitrofanov (30). Visualizing the inhomogeneity of optical transmissivity and Faraday rotation in $n-GaAs$. IVUZ Priboro, no. 5, 1977, 92-96.

482. Malyutenko, V.K., S.S. Bolgov, and V.I. Pipa (0). Photoluminescence of InSb in crossed fields. ZhTF P, no. 2, 1977, 51-54. (RZhF, 6/77, 6D876)
483. Movsesyan, M.Ye., and R.Kh. Drampyan (0). Effect of radiation intensity on the rotation of polarization density in a magnetic field. DAN Arm, no. 2, 1976, 91-95. (RZhF, 5/77, 5D1041)
484. Nechayeva, T.A. (0). Plenum of the Commission on the Chemistry of Photographic Processes, Academy of Sciences of the USSR, Odessa, 26-28 May 1976. ZhNiPFiK, no. 3, 1977, 232-237.
485. Peysakhson, I.V., and Yu.V. Bazhanov (7). Concave spherical diffraction lattices with compensated astigmatism in systems using a Rowland circle. OMP, no. 5, 1977, 22-24.
486. Popova, T.Ya. (0). Using modulated optical radiation to obtain narrow nonlinear resonances in gas spectroscopy. ZhPS, v. 26, no. 5, 1977, 844-849.
487. Samartsev, V.V., and R.G. Usmanov (38). Self-induced transparency and optical echo in lithium aluminate. ZhETF, v. 72, no. 4, 1977, 1702-1709.
488. Semenov, A.Ye., and A.V. Sechkarev (0). Spectroscopic determination of the directions of the main axes of a tensor for derivatives of polarizability of molecular single crystals. ZhPS, v. 26, no. 6, 1977, 1085-1089.

489. Shaldin, Yu.V. (13). Calculating the spontaneous polarization of uniaxial pyroelectrics according to the results of optical measurements. FTT, no. 6, 1977, 1580-1589.
490. Shvarts, K.K. (0). Mechanism of photorefraction in ferroelectrics. Cited in ZhNiPfiK, no. 3, 1977, 235.
491. Sizov, F.F., L.F. Prokopchuk, and Ye.A. Sal'kov (6). Characteristics of the photoconductivity of $Pb_{1-x}Sn_xTe$ single crystals. FTT, no. 6, 1977, 1845-1847.
492. Skrebov, V.N., and A.I. Eykhval'd (12). Study of the behavior of a neutral component of a plasma during pulsed excitation of a discharge in argon. ZhTF, no. 5, 1977, 977-981.
493. Slivka, V.Yu., V.S. Gerasimenko, V.A. Stefanovich, V.P. Zakharov, I.Yu. Roman, and M.I. Golovey (136). Optical properties of $TlAsS_2$, Tl_3AsS_3 , and Tl_3AsS_4 . UFZh, no. 6, 1977, 1023-1027.
494. Smirnova, T.N., and Ye.A. Tikhonov (5). Efficiency of two-photon absorption in the radiation field of single- and multi-frequency lasers. KE, no. 5, 1977, 1105-1109.
495. Vinogradov, Ye.A., N.N. Mel'nik, A.Ye. Tsurkan, and L.V. Kicherman (0). Raman scattering in ZnO single crystals. ZhPS, v. 26, no. 6, 1977, 1059-1062.
496. Vlokh, O.G., and A.V. Tsarik (114). Effect of an electrical field on the polarization of light in $Bi_{12}SiO_{20}$, $Bi_{12}GeO_{20}$, and $NaBrO_3$ crystals. UFZh, no. 6, 1977, 1032-1036.

497. Voronkov, V.V., G.I. Boronkova, B.V. Zubov, V.P. Kalinushkin, B.B. Krynetskiy, T.M. Murina, and A.M. Prokhorov (1). Scattering of light due to microdefects in Si and Ge. FTT, no. 6, 1977, 1784-1791.
498. Zakharchenya, B.P., V.I. Zemskiy, and D.N. Mirlin (4). Polarization dependences in the spectrum of hot photoluminescence in GaAs-type semiconductors and their relationship to the processes of pulsed and spin relaxation. FTT, no. 6, 1977, 1725-1732.

J. BEAM-TARGET INTERACTION

1. Metal Targets

499. Alebastrova, Ye.P., G.V. Davydov, L.I. Mirkin, and Ye.F. Smyslov (162). Some characteristics in the structure and properties of tantalum foils irradiated by optical laser pulses in air. DAN B, no. 6, 1977, 528-531.
500. Artemov, V.A., M.A. Vlasov, and A.V. Zharinov (139). Explosive character of the vaporization process during e-beam processing of metals. TVT, no. 3, 1977, 673-674.
501. Balatskiy, A.A., A.A. Uglov, G.Ya. Lobacheva, and M.V. Orekhov (0). The effect of focused laser radiation on the melting characteristic of a steel sample. FiKhOM, no. 2, 1977, 3-6.
502. Bokhonov, A.F., V.S. Burakov, V.V. Zhukovskiy, and A.A. Stavrov (0). Study of the erosional activity of laser radiation in an interconsistent [plasma-switched] lasing regime. ZhPS, v. 26, no. 5, 1977, 821-825.

503. Golovin, Yu.I., V.M. Finkel', and A.A. Sletkov (0). Cratering at the tip of a crack under the action of a high-power local electromagnetic field. FikHOM, no. 3, 1977, 18-23.
504. Karas', V.I., S.S. Moiseyev, V.Ye. Novikov, and V.P. Seminozhenko (36,82). Theory of the volt-ampere characteristics of N-S structures exposed to laser irradiation. Fizika nizkikh temperatur, no. 5, 1977, 627-632.
505. Kokora, A.N., A.A. Zhukov, and L.Z. Epshteyn (0). Surface hardening of gray-iron parts by c-w laser radiation. FikHOM, no. 3, 1977, 28-34.
506. Kononov, V.A., and S.A. Mikhnov (0). Dimensional processing of materials by a ruby laser operating in a free-running and single pulse regime. FikHOM, no. 3, 1977, 35-38.
507. Mikhaylov, B.S., and Z.Z. Khamzin (0). Heating thin metallic films by an optical pulse with the intensity varying linearly with time. FikHOM, no. 2, 1977, 143-145.
508. Samokhin, A.A. (1). Behavior of the surface temperature and the coefficient of reflection of a metal under the action of intense optical radiation. KSpF, no. 12, 1976, 12-15. (RZhF, 5/77, 5D1042)
509. Velotskiy, A.V., V.S. Kovalenko, V.I. Volgin, and V.I. Pshenichnyy (0). Study of the possibility of alloying the surface of iron with molybdenum under the action of laser radiation. FikHOM, no. 3, 1977, 24-27.

2. Dielectric Targets

510. Bal'kyavichyus, P.Y., Y.P. Lukoshyus, and E.K. Maldutis (50). Effect of stimulated Brillouin scattering on the destruction of glass by laser radiation. ZhTF P, no. 12, 1977, 542-547.
511. Bonch-Bruyevich, A.M., V.I. Zinchenko, and L.N. Kaporskiy (0). Study of the breakdown of air near transparent dielectrics. ZhTF, no. 5, 1977, 1055-1058.
512. Golubev, S.G., Yu.N. Lokhov, and Yu.D. Fiveyskiy (0). Threshold of avalanche ionization in solid transparent dielectrics in the field of a high-power focused single laser pulse. FiKhOM, no. 3, 1977, 3-11.
513. Kask, N.Ye., L.S. Korniyenko, V.V. Radchenko, G.M. Fedorov, and D.B. Chopornyak (98). Softening and hardening temperatures of glass under heating by pulsed laser radiation. ZhTF, no. 5, 1977, 1059-1062.
514. Libenson, M.N. (0). Plasma-chemical model of optical breakdown of transparent dielectrics. ZhTF P, no. 10, 1977, 446-450.
515. Tikhomirov, G.P., and T.S. Turovskaya (7). Electron-microscopic studies of threshold changes in optical glass occurring under the action of laser radiation. OMP, no. 5, 1977, 65-67.
516. Vinogradov, An.V., and F.S. Fayzullov (1). The role of multiphoton and impact ionization in the breakdown of dielectrics by picosecond laser pulses. KE, no. 5, 1977, 1144-1147.

3. Miscellaneous Studies

517. Apostol, I.D., L.C. Arsenovici, I.N. Mihailescu, V.S. Tatu, and V.S. Teodorescu (NS). Optical microscopy study of damage produced in KCl by TEA-CO₂ laser irradiation. Revue roumaine de physique, no. 7, 1976, 671-676. (RZhF, 5/77, 5D1049)
518. Bukova, Ye.S., V.G. Dorofeyev, V.A. Kareva, V.S. Makin, and V.N. Smirnov (7). Interference study of distortions occurring in NaCl, KCl and KBr plates under the action of 10.6 μ radiation. OMP, no. 6, 1977, 44-47.
519. Butenin, A.V., and B.Ya. Kogan (0). Pyrolysis of organic liquids under laser breakdown. ZhTF P, no. 10, 1977, 433-436.
520. Golubnichiy, P.I., P.I. Dyadyushkin, N.I. Kalashnikov, G.S. Kalyuzhnyy, and A.D. Filonenko (0). Sonoluminescence and shock-acoustic pulses triggered by laser breakdown in aqueous glycerine mixtures. Cited in IVUZ Fiz, no. 6, 1977, 155.
521. Krutyakova, V.P., and V.N. Smirnov (0). Study of the nature of emission from alkali-halide crystals under the action of pulsed 10.6 μ radiation. ZhTF P, no. 24, 1976, 1111-1114. (RZhF, 5/77, 5D1043)
522. Schuette, F.J. (NS). Destruction of optical media by laser radiation. Potsdammer Forschungen, v. B, no. 7, 1976, 222-228. (RZhF, 6/77, 6D1233)
523. Uglov, A.A., and A.N. Kokora (22). Thermophysical and hydrodynamic effects during processing of materials by a laser beam. KE, no. 6, 1977, 1189-1202.

524. Uglov, A.A., V.V. Ivanov, and V.I. Koren'kov (0). Calculating the profile of a depression in the liquid phase formed by the action of a concentrated heat source. FikHOM, no. 3, 1977, 148-149.

K. PLASMA GENERATION AND DIAGNOSTICS

525. Anan'in, O.B., Yu.A. Bykovskiy, V.L. Kantsyrev, Yu.P. Kozyrev, and A.M. Raspopin (16). Laser plasma as a source of soft X-ray radiation. KE, no. 5, 1977, 965-969.

526. Badziak, J., Z. Jankiewicz, and W. Nowakowski (NS). Propagation of divergent beams of coherent radiation in a laser amplifier. BWAT, no. 6, 1975, 33-43. (RZhRadiot, 5/77, 5Yell15)

527. Baryshnikov, F.F., and V.S. Lisitsa (3). Contours of atomic absorption lines of laser radiation in a plasma. Fizika plazmy, no. 3, 1977, 701-709.

528. Bashkin, A.S., P.G. Grigor'yev, V.I. Igoshin, V.Yu. Nikitin, and A.N. Orayevskiy (1). DF-CO₂ chemical amplifier for short optical pulses. KE, no. 5, 1977, 1004-1008.

529. Basov, N.G., O.N. Krokhin, Yu.A. Mikhaylov, V.V. Pustovalov, A.A. Rupasov, V.P. Silin, G.V. Sklizkov, V.T. Tikhonchuk, and L.S. Shikanov (0). Anomalous interaction of high-power laser radiation with a dense plasma. IN: Sb 6, 342-355. (RZhF, 6/77, 6G181)

530. Belokon', V.A. (0). Inertial confinement of a thermonuclear plasma: a new stage [Book review of Problemy lazernogo termoyadernogo sinteza (Problems of laser fusion) compiled by A.A. Filyukov]. UFN, v. 122, no. 1, 1977, 179-182.

531. Borodziuk, S., R. Miklaszewski, and Z. Skladanowski (NS). Numerical study of a plasma formed in the "plane disk — two opposed laser beams" experiment. BWAT, no. 10, 1976, 77-88. (RZhRadiot, 5/77, 5Ye343)
532. Bykovskiy, Yu.A., and Yu.P. Kozyrev (16). Multiple-charge ions in a laser plasma. Priroda, no. 5, 1977, 54-64.
533. Cojocar, E., M.V. Udrea, and V.G. Velculescu (NS). Target-stimulated laser breakdown in air. Revue roumaine de physique, no. 7, 1976, 767-769. (RZhF, 5/77, 5D1032)
534. Danilov, A.Ye., N.N. Demchenko, V.B. Rozanov, G.V. Sklizkov, and S.I. Fedotov (1). Calculating the symmetry of spherical target irradiation in multichannel laser devices. KE, no. 5, 1977, 1034-1041.
535. Denus, S., S. Kaliski, L. Karpinski, A. Kasperczuk, A. Nowak, M. Paduch, L. Pokora, M. Sadowski, and J. Wolowski (NS). Interferometric study of a plasma expanding in a magnetic field. BWAT, no. 10, 1976, 11-25. (RZhF, 5/77, 5G340)
536. Gacek, A., S. Kaliski, and A. Sarzynski (NS). Concentrated thermal wave in a plasma, allowing for hot electrons. BWAT, no. 9, 1975, 3-10. (RZhF, 5/77, 5G337)
537. Gacek, A., S. Kaliski, and A. Sarzynski (NS). Averaged method for describing concentrated thermal waves in a plasma, allowing for hot electrons. BWAT, no. 9, 1975, 11-21. (RZhF, 5/77, 5G336)

538. Gaponov, S.V., B.M. Luskin, B.A. Nesterov, and N.N. Salashchenko (0). Low-temperature epitaxy of films condensed from a laser plasma. ZhTF P, no. 12, 1977, 573-576.
539. Golubev, V.S., L.I. Kiselevskiy, and V.N. Snopko (0). Breakdown of air by pulsed CO₂ laser radiation near a target. ZhPS, v. 26, no. 6, 1977, 983-987.
540. Gudzenko, L.I., V.S. Marchenko, and S.I. Yakovlenko (1). The possibility of light amplification in a recombining thallium fluoride plasma. KE, no. 6, 1977, 1368-1369.
541. Ilyukhin, A.A., G.V. Peregudov, Ye.N. Ragozin, I.I. Sobel'man, and V.A. Chirkov (1). Problem of lasers in the 500-700 Å far ultraviolet. ZhETF P, v. 25, no. 12, 1977, 569-574.
542. Jach, K., S. Kaliski, and R. Swierczynski (NS). Shock wave reflected in the center of a plasma ball. BWAT, no. 3, 1975, 11-23. (RZhF, 5/77, 5G329)
543. Kaliski, S. (NS). Conditions of a reflectionless passage of a shock wave through a medium of jump-like nonhomogeneity. Journal of Technical Physics [Poland], v. 17, no. 3, 1976, 245-252. (RZhF, 6/77, 6G175)
544. Kaliski, S. (NS). Averaged description of the implosion of a spherical shell for generating microfusion. BWAT, no. 2, 1975, 3-12. (RZhF, 5/77, 5G321)

545. Kaliski, S., and B. Kaminski (NS). Effect of a dual temperature nature on the compression parameters of a plasma after the reflection of a concentrated shock wave from the center. BWAT, no. 5, 1975, 9-32. (RZhF, 5/77, 5G323)
546. Kaliski, S. (NS). Estimating the growth of neutron yield from a plasma focus under the action of a CO₂ laser. BWAT, no. 7, 1975, 3-11. (RZhF, 5/77, 5G339)
547. Kaliski, S., J. Baranowski, W. Borowiecki, S. Denus, M. Gryzinski, K. Jach, A. Jerzykiewicz, M. Kielesinski, S. Kowalski, J. Kubicki, Z. Kurzynski, J. Nowikowski, P. Parys, T. Rusinowicz, M. Sadowski, J. Wawer, J. Wolski, and J. Wolowski (NS). Theoretical and experimental studies on a laser plasma focus. BWAT, no. 8, 1975, 3-17. (RZhF, 5/77, 5G338)
548. Kaliski, S., W. Babul, J. Bagrowski, L. Borowicz, J. Czekaj, S. Denus, S. Derentowicz, M. Fruczek, Z. Jankiewicz, M. Korzun, J. Makowski, S. Nagraba, W. Nowakowski, J. Szydlak, W. Szypula, R. Wodnicki, and J. Wolowski (NS). Explosive and laser compression of matter. BWAT, no. 10, 1975, 3-24. (RZhF, 5/77, 5D1050)
549. Kaliski, S. (NS). Laser antihydrogen "microexplosion". BWAT, no. 11, 1975, 3-11. (RZhF, 5/77, 5D1078)
550. Kaliski, S. (NS). Generation of intense fields in microtargets by means of a concentrated electromagnetic wave. BWAT, no. 3, 1976, 3-7. (RZhF, 5/77, 5G341)

551. Kaliski, S. (NS). Isentropic explosive compression by means of a "soft" external layer. BWAT, no. 8, 1976, 3-11. (RZhF, 5/77, 5G335)
552. Kaliski, S. (NS). Isentropic explosive compression by means of an external layer with relative compressibility. BWAT, no. 9, 1976, 3-13. (RZhF, 6/77, 6D1236)
553. Kaliski, S. (NS). An "isothermal" shock wave. BWAT, no. 11, 1976, 3-6. (RZhF, 6/77, 6G184)
554. Kaliski, S. (NS). Possibility of generating high densities from concentrated compression of a plasma. BWAT, no. 11, 1976, 7-13. (RZhF, 5/77, 5G345)
555. Korobkin, V.V., S.L. Motylev, R.V. Serov (1), and David F. Edwards (American). Structure of spontaneous magnetic fields in a laser plasma. ZhETF P, v. 25, no. 11, 531-535.
556. Markov, A.N., A.B. Fradkov, and V.D. Chernitskiy (1). Obtaining targets from solid hydrogen for laser thermonuclear fusion. KE, no. 5, 1977, 1132-1134.
557. Mikhaylov, Yu.A., S.A. Pikuz, G.V. Sklizkov, A.Ya. Fayenov, and S.I. Fedotov (0). Observation of Ti XXI — Fe XXV spectra in X-radiation of a laser plasma. OIS, v. 42, 1977, 811.
558. Nastoyashchiy, A.F. (0). Fine structure of Raman scattering lines and diagnostics of a laser plasma. Atomnaya energiya, v. 42, no. 6, 1977, 501-502.

559. Nemchinov, I.V., M.P. Popova, and L.P. Shubadeyeva (0). Propagation of a two-dimensional supersonic radiative wave. ZhPMTF, no. 3, 1977, 34-41.
560. Romanov, G.S., and Yu.A. Stankevich (334). Calculating nonstationary axisymmetrical plasma flares in an optical detonation regime. DAN B, no. 6, 1977, 503-506.
561. Vlasov, R.A., and S.P. Zhvavy (3). Method of moments in the problem of optical avalanche breakdown. DAN B, no. 5, 1977, 408-410.

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

562. Bayborodin, Yu.V. (0). Vvedeniye v lazernuyu tekhniku (Introduction to laser technology). Kiyev, Tekhnika, 1977, 240 p. (RZhRadiot, 6/77, 6Ye9)
563. Bogdankevich, O.V., S.A. Darznek, and P.G. Yeliseyev (0). Poluprovodnikovyye lazery (Semiconductor lasers). Moskva, Nauka, 1976, 415 p. (RZhF, 5/77, 5D964)
564. Filyukov, A.A., compiler (0). Problemy lazernogo termoyadernogo sinteza (Problems of laser fusion). Moskva, Atomizdat, 1976, 295 p. Cited in UFN, v. 122, no. 1, 1977, 179.
565. Godenko, L.P., and V.S. Mashkevich (0). Vvedeniye v kvantovuyu elektroniku spektral'no neodnorodnykh sred (Introduction to quantum electronics of spectrally inhomogeneous media). Kiyev, Naukova dumka, 1977, 188 p.
566. Goncharenko, A.M. (0). Gaussovy puchki sveta (Gaussian light beams). Minsk, Nauka i tekhnika, 1977, 144 p.
567. Gurevich, S.B., ed. (0). Golografiya i obrabotka informatsii (Holography and processing of information). Leningrad, Nauka, 1976, 196 p. (RZhF, 6/77, 6D1307)
568. Korbukov, G.Ye., and S.V. Kulakov, eds. (0). Radio- i akusticheskaya golografiya (Radio-frequency and acoustic holography). Leningrad, Nauka, 1976, 144 p. (RZhRadiot, 6/77, 6Ye367)

569. Lazarev, I.R. (0). Lazery v onkologii (Lasers in oncology). Kiyev, Zdorov'ya, 1977, 136 p.
570. Lazery i ikh ispol'zovaniye v fizicheskikh issledovaniyakh (Lasers and their use in physics research). Fizicheskiy institut AN SSSR. Trudy, no. 91, 1977, 227 p.
571. Naray, Zs. (NS). Laser und ihre Anwendungen. Eine Einfuehrung (Lasers and their application. An introduction). Translated into German from the Hungarian. Leipzig, Geest und Portig K-G, 1976, 311 p. (RZhRadiot, 6/77, 6Ye355)
572. Orlov, V.A. (0). Lazery v voyennoy tekhnike. Po materialam zarubezhnoy pechati (Lasers in military technology. From the foreign press). Moskva, Voenizdat, 1976, 174 p.
573. Osinskiy, V.I. (299). Integral'naya optoelektronika (Integrated optoelectronics). Minsk, Nauka i tekhnika, 1977, 248 p.
574. Poponin, V.P., and V.F. Shanskiy (247). Impul'snyye CO₂-lazery s nesamostoyatel'nym razryadom (Pulsed CO₂ lasers with a non-selfsustaining discharge). Leningrad, Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury, 1976, 100 p. (KL, 22/77, 18200)
575. Privalov, V.Ye. (0). Gazorazryadnyye lazery v sudovykh izmeritel'nykh kompleksakh (Gas lasers in marine measuring systems). Leningrad, Sudostroyeniye, 1977, 152 p.

576. Prokopenko, N.D., and S.G. Kazak (0). Opticheskiye kvantovyye generatory i golografiya v izmeritel'noy tekhnike (Lasers and holography in measuring technology). Moskva, NII informatsii po mashinostroyeniyu, Seriya S-6-3 Tekhnologiya metalloobrabat'yvayushchego proizvodstva, 1976, 44 p. (KL, 22/77, 18202)
577. Rivlin, L.A. (0). Pervaya kniga po dinamike izlucheniya poluprovodnikovyykh inzhektionsionnykh lazerov (First book on the radiation dynamics of semiconductor injection lasers). Moskva, Sovetskoye radio, 1976. (RZhF, 5/77, 5D965)
578. Sterligov, V.L. (0). Lazery v aviatsii (Lasers in aviation). Moskva, Transport, 1977, 77 p.
579. Tsyurul'nikov, D.A. (410). Nekotoryye voprosy registratsii gologramm v modulirovannom izluchenii (Some problems of recording holograms with modulated radiation). Tsentral'nyy institut aviatsionnogo motorostroyeniya. Trudy, no. 727, 1976, 34 p. (KL, 28/77, 23780)
580. I Vsesoyuznaya konferentsiya "Optika lazerov", Leningrad, 4-8 yanvarya 1977 g. Tezisy dokladov (First All-Union Conference on Laser Optics. Leningrad, 4-8 January 1977. Summaries of the reports). Leningrad, 1976 [sic], 408 p. (RZhF, 6/77, 6D1129)
581. VIII Vsesoyuznaya shkola po golografii. Materialy (Eighth All-Union Seminar on Holography. Materials). Leningrad, 1976, 348 p. (RZhF, 6/77, 6D1277)

IV. SOURCE ABBREVIATIONS

(CIRC Codens)

BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN Arm	(DANAA)	Akademiya nauk Armyanskoy SSR. Doklady
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
EOM	(EOBMA)	Elektronnaya obrabotka materialov
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika gorenija i vzryva
FIKhOM	(FKOMA)	Fizika i khimiya obrabotki materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
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'
Kristal	(KRISA)	Kristallografiya
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
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
RZhGeod	(RZGAB)	Referativnyy zhurnal. Geodeziya i aeros'yemka
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1		Sbornik. Vsesoyuznaya konferentsiya "Optika lazerov." 1st. Leningrad, 4-8 January 1977. Tezisy dokladev. Leningrad, 1976 [sic].
Sb2		Poluprovodnikovyye materialy i ikh primeneniye. Kishinev, Shtiintsa, 1976.
Sb3		TsAGI [Tsentral'nyy aero-gidrodinamicheskiiy institut]. Uchenyye zapiski, no. 3, 1976.
Sb4		Aerofizicheskiye issledovaniya, no. 6, Novosibirsk, 1976.
Sb5		Golografiya i obrabotka informatsii. Leningrad, Nauka, 1976.
Sb6		Problemy teorii plazmy. Kiyev, Naukova dumka, 1976.
Sb7		Vsesoyuznaya shkola po golografi. 8th. Materialy, Leningrad, 1976.
Sb8		Itogi nauki i tekhnika. Radiotekhnika, no. 11, 1976.
Sb9		Eksperimental'nyye metody i apparatura dlya issledovaniy turbulentnosti. Novosibirsk, 1976.
Sb10		Radio- i akusticheskaya golografiya. Leningrad, Nauka, 1976.
Sb11		Vsesoyuznaya konferentsiya po fizike elektronnykh i atomnykh stolknoveniy. Trudy. Leningrad, 1976.
Sb12		Radiotekhnika, no. 42, 1977.
Sb13		Morskiye gidrofizicheskiye issledovaniya, no. 3(74). 1976.
Sb14		Teplofizika i teplotekhnika, no. 33, 1977.
TKiT	(TKTEA)	Tekhnika kino i televideniya

TR1		AN SSSR. Fizicheskiy institut. Trudy, no. 91, 1977.
Tr2		Tbilisskiy universitet. Trudy, no. 173, 1976.
Tr3		AN SSSR. Fizicheskiy institut. Trudy, no. 90, 1976.
Tr4		Yerevanskiy politekhnicheskiy institut. Mezhvuznyy sbornik nauchnykh trudov. Stroitel'stvo i arkhitektura, no. 2, 1976.
Tr5		Moskovskoye vyssheye tekhnicheskoye uchilishche. Trudy, no. 235, 1976.
Tr6		Tallinskiy politekhnicheskiy institut. Trudy, no. 406, 1976.
Tr7		VNI kinofotoinstitut. Trudy, no. 84, 1976.
Tr8		VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Trudy, no. 29(59), 1976.
Tr9		Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 184(244), 1975.
Tr10		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 194, 1976.
Tr11		Leningradskiy gornyy institut. Zapiski, no. 1, 1975.
Tr12		Gosudarstvennyy gidrologicheskiy institut. Trudy, no. 237, 1976.
Tr13		Gos NI tsentr izucheniya prirodnikh resursov. Trudy, no. 2, 1976.
TVT	(TVYTA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Seriya fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
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

V. AUTHOR AFFILIATIONS LIST

- NS. Non-Soviet
0. Affiliation not given
 1. Physics Institute im Lebedev, AN SSSR, Moscow (Fizicheskiy institut im Lebedeva AN SSSR).
 2. Moscow State University (Moskovskiy gosudarstvennyy universitet).
 3. Institute of Physics, AN BSSR, Minsk (Institut fiziki AN BSSR).
 4. Physicotechnical Institute im Ioffe, Leningrad (Fiziko-tekhnicheskiy institut im Ioffe).
 5. Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR).
 6. Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR).
 7. State Optical Institute im Vavilov, Leningrad (Gosudarstvennyy opticheskiy institut im Vavilova).
 8. Radiophysics Scientific Research Institute at Gorkiy State University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom gos universitete).
 10. Institute of Semiconductor Physics, Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN SSSR).
 12. Leningrad State University (Leningradskiy gos universitet).
 13. Institute of Crystallography, AN SSSR, Moscow (Institut kristallografiya AN SSSR).
 16. Moscow Engineering Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut).
 17. Institute of Mechanical Problems, AN SSSR, Moscow (Institut problem mekhaniki AN SSSR).
 21. Acoustics Institute, AN SSSR, Moscow (Akusticheskiy institut AN SSSR).
 22. Institute of metallurgy im Baykov, Moscow (Institut metallurgii im Baykova).
 24. Moscow Higher Technical College im Bauman (Moskovskoye vysheye tekhnicheskoye uchilishche im Baumana).
 30. Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki).
 32. Physics Scientific Research Institute at Leningrad State University (Fizicheskiy NII pri Leningradskom gos universitete).
 36. Physicotechnical Institute of Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR).
 37. Yerevan State University (Yerevanskiy gos universitet).
 38. Kazan' Physicotechnical Institute (Kazanskiy fiziko-tekhnicheskiy institut).
 39. Institute of Cybernetics, AN GruzSSR (Institut kibernetiki AN GruzSSR).
 40. Tbilisi State University (Tbilisskiy gos universitet).
 41. Rostov-on-Don State University (Rostovskiy-na-Donu gos universitet).
 49. Vilnius State University (Vil'nyusskiy gos universitet).
 50. Institute of Semiconductor Physics, AN LitSSR, Vilnius (Institut fiziki poluprovodnikov AN LitSSR).
 51. Kiev State University (Kiyevskiy gos universitet).
 59. Institute of Physics Research, AN ArmSSR (Institut fizicheskikh issledovaniy AN ArmSSR).
 64. Institute of Atmospheric Physics, AN SSSR (Institut fiziki atmosfery AN SSSR).
 67. Institute of Physics of Chemistry, AN SSSR (Institut khimicheskoy fiziki AN SSSR).
 71. Institute of Applied Mathematics, AN SSSR (Institut prikladnoy matematiki AN SSSR).
 72. Institute of Spectroscopy, AN SSSR (Institut spektroskopii AN SSSR).

73. Institute of Theoretical Physics im Landau, AN SSSR (Institut teoreticheskoy fiziki im Landau AN SSSR).
74. Institute of High Temperatures, AN SSSR (Institut vysokikh temperatur AN SSSR).
75. Institute of Automation and Electronic Measurements, Siberian Branch AN SSSR (Institut avtomatiki i elektrometrii SOAN).
78. Institute of Atmospheric Optics, Siberian Branch AN SSSR (Institut optiki atmosfery SOAN).
79. Institute of Nuclear Physics, Siberian Branch AN SSSR (Institut yadernoy fiziki SOAN).
82. Physicotechnical Institute, AN UkrSSR (Fiziko-tekhnicheskiy institut AN UkrSSR).
87. Belorussian State University (Belorusskiy gos universitet).
90. Electrotechnical Institute of Communications (Elektrotekhnicheskiy institut svyazi).
92. Physicochemical Institute im Karpov (Fiziko-khimicheskiy institut im Karpova).
96. State Scientific Research Institute of Photochemical Planning (GOSNIKhIMFOTOPROYEKT).
98. Institute of Nuclear Physics at Moscow State University (Institut yadernoy fiziki pri Moskovskom gos universitete).
99. Institute of Mechanics and Physics, Saratov (Institut mekhaniki i fiziki).
110. Leningrad Electrotechnical Institute (Leningradskiy elektrotekhnicheskiy institut).
111. Leningrad Mining Institute (Leningradskiy gornyy institut).
114. L'vov State University (L'vovskiy gos universitet).
118. Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut).
133. Central Aerohydrodynamic Institute im Zhukovskiy (Tsentral'nyy aerogidrodinamicheskiy institut im Zhukovskogo).
135. Central Scientific Research Institute of Communications (Tsentral'nyy NII svyazi).
136. Uzhgorod State University (Uzhgorodskiy gos universtitet).
139. All-Union Electrotechnical Institute (Vsesoyuznyy elektrotekhnicheskiy institut).
140. All-Union Scientific Research Institute of Physicotechnical and Radiotechnical Measurements (VNII fiziko-tekhnicheskikh i radio-tekhnicheskiy izmereniy, VNIFTRI).
141. All-Union Scientific Research Institute of Opticophysical Measurements (VNII optiko-fizicheskikh izmereniy).
144. All-Union Scientific Research Institute of Television and Radio Broadcasting (VNII televideniya i radioveshchaniya).
159. Institute of Thermophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut teplofiziki SOAN).
162. Moscow State Pedagogical Institute (Moskovskiy gos pedagogicheskiy institut).
163. All-Union Scientific Research Institute of Metrology im Mendeleyev (VNII metrologii im Mendeleyeva).
177. Riga Institute for Civil Aviation Engineers (Rizhskiy institut inzhenerov grazhdanskoy aviatsii).
192. Belorussian Technological Institute (Belorusskiy tekhnologicheskiy institut).
193. Institute of Theoretical and Applied Mechanics, Siberian Branch, AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mekhaniki SOAN).
201. Institute for Problems of Information Transmission, AN SSSR, Moscow (Institut problem peredachi informatsii AN SSSR).

- 210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).
- 220. Institute of Experimental Meteorology (Institut eksperimental'noy meteorologii).
- 224. Yerevan Polytechnic Institute (Yerevanskiy politekhnicheskiy institut).
- 227. Tashkent State University (Tashkentskiy gos universitet).
- 231. Scientific Research Institute of Motion Pictures and Photography (NI kinofotoinstitut).
- 247. Scientific Research Institute of Electrophysical Equipment im Yefremov, Leningrad (NII elektrofizicheskoy apparatury im Yefremova).
- 255. Tallinn Polytechnical Institute (Tallinskiy politekhnicheskiy institut).
- 295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimicheskoy kinetiki i goreniya SOAN).
- 299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
- 334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom gos universitete).
- 362. Leningrad Pedagogical Institute (Leningradskiy pedagogicheskiy institut).
- 388. Institute of History of Natural Science and Technology, AN SSSR, Moscow (Institut istorii yestestvoznaniya i tekhniki AN SSSR).
- 394. State Hydrological Institute (Gosudarstvenny gidrologicheskiy institut).
- 404. State Scientific Research Center for Studying Natural Resources (Gos NI tsentr izucheniya prirodnykh resursov).
- 410. Central Scientific Research Institute of Aircraft Engines (Tsentral'nyy NII aviatsionnogo motorostroyeniya).
- 415. Kishinev Polytechnic Institute (Kishinevskiy politekhnicheskiy institut).
- 418. Institute of Geological Sciences, AN KazSSR, Alma Ata (Institut teologicheskikh nauk AN KazSSR).
- 420. Institute of Silicate Chemistry im Grebenshchikov, AN SSSR, Leningrad (Institut khimii silikatov im Grebenshchikova AN SSSR).
- 421. Institute of Physics of Metals, Ural Scientific Center, AN SSSR, Sverdlovsk (Institut fiziki metallov Ural'skogo nauchnogo tsentra AN SSSR).
- 422. Institute of Technical Thermophysics, AN UkrSSR (Institut tekhnicheskoy teplofiziki AN UkrSSR).
- 423. Dnepropetrovsk Civil Engineering Institute (Dnepropetrovskiy inzhenerno-stroitel'nyy institut).
- 424. Voroshilovgrad Mechanical Engineering Institute (Voroshilovgradskiy mashinostroitel'nyy institut).
- 425. Institute of Virusology im Ivanovsko, Moscow (Institut virusologii im Ivanovsko).

INDEX

A	ABAKHOV B M	45	ARUSHANYAN L YE	42	BAYKOVA N D	45	BOROVKOVA V A	52
	ABAKHOV G A	1	ARUTYUNYAN DZH S	59	BAZARSKIY O V	65	BOROWICZ L	77
	ABLOVA M S	65	ARZRUIMTSYAN A G	58	BAZHANOV YU V	68	BOROWIECKI W	77
	ABRANOV A F	5	ASHURBEKOV S A	67	BELABAYEV K G	24	BOYKO V A	9
	ABROSIIMOV G V	13,18	ATOVMBYAN L O	25	BELANOV A S	37	BOZHEVOL'NYY S I	21
	ABURABYA A M	33	AVANESYAN V S	8	BEL'DYUGIN I M	26	BRAGINA T M	66
	AFONIN YE I	56	AVDEYEVA N I	37	BELIK V P	65	BRANITSKIY G A	50
	AGAPOV A M	33	B	24	BELOKON' V A	74	BRAUDE V B	39
	AKIMOV A V	36	BABEL'SKIY D M	64	BELOKRINITSKIY N S	58	BREDIKHIN V I	24
	AKIMOVA I V	21	BABUL W	77	BELOKUCHKIN V YE	33	BRITOV A D	2
	AKOPYAN S A	42	BADZIART H-J	3	BELOUSOV G F	55	BRODOVICH N A	15
	AKSENOV YE T	23	BAGAYEV S N	29,74	BELOUSOV P YA	58	BRUNIN A N	14
	ALEBASTROVA YE P	70	BAGDASAROV KH S	1	BELOUSOVA I M	13	BRUYEV A S	33
	ALEKSANDROV A P	52	BAGDATASHVILI V N	31	BELYAYEV L H	65	BRYUKNER F	32
	ALEKSANDROV A S	3	BAGDASAR'YAN KH S	52	BENCZE GY L	43,47	BUNKIN A F	73
	ALEKSANDROV K S	28	BAGROWSKI J	77	BENDERSKIY V A	29	BUNKIN A F	58
	ALEKSANDROV YE B	65	BAGHAT E.P	35	BENEDICHUK I V	65	BURAKOV V S	70
	ALEKSEYEV V A	6,57	BAKHRAKH L D	58	BERENBERG V A	2	BURKOVSKIY S I	59
	ALEKSEYEV V N	4	BALASHOV I F	24	BERENBERG S P	43	BURKIN V A	13
	ALEKSEYEVA V I	6	BALATSKIY A A	70	BEREZINA S I	58	BURTISEV V A	13
	ALIMPIYEV A K	57	BAL'KYAVICHYUS P Y	72	BEREZOVSKIY V R	45	BUSHUYEV V A	33
	ALIMPIYEV S S	52	BALT'RAMYUNAS R	58	BIREZOVSKIY V R K A	7	BUTAYEVA T I	2
	AL'KAYEV M I	57	BALYKIN V N	8	BIRYUKOV V N	28	BUTENIN A V	73
	AL'TSHULER G B	29	BARANOWSKI J	77	BISYARIN V P	40	BUTUSOV M H	46
	ANAN'IN O B	74	BARBASHEV A I	29	BLAHA V	10	BYCHKOV A G	67
	ANDREYEV A A	65	BARILL G A	58	BLASZCZAK Z	30	BYCHKOV YU I	9,12
	ANDREYEV G A	40	BARKHUDAROV E M	45	BLETSKAN D I	62	BYKOVA T T	52
	ANDREYEV R B	26	BARSUKOV YU V	45	BOBASHEV S V	65	BYKOVSKIYA L A	67
	ANDREYEV S P	6	BARYSHNIKOV F F	74	BOBRUK V I	7	BYKOVSKIY N YE	4,34
	ANDRONOVA I A	57	BASHARIN V A	56	BOBROV B D	13	BYKOVSKIY YU A	65,74,75
	ANDRZEJEMSKI N	20	BASHKIN A S	17,18,74	BOBYL' V G	66	BYLKIN V I	13
	ANIKIN V I	24	BASOV A A	22	BOGANOV A G	38	C	
	ANISIMOV S I	29	BASOV N G	12,13,74	BOGATOV A P	3	CAR R	38
	ANISTRATOV A T	28	BASOV YU G	19	BOGDANKEVICH O V	80	CHARNETSKIY V N	60
	ANOKHOV S P	33	BASOVA T A	65	BOGDANOVA M V	14	CHEBERYAK M S	50
	ANTIPEKHO B M	24	BASUN S A	56	BOGOMOLOV A S	46	CHECHENINA YE P	34
	ANUFRIK S S	5	BATIKIN S A	3	BOGOMOLOV K S	31	CHEKALINSKAYA YU I	34
	APOSTOL I D	73	BATRUKOVA M G	6	BOGHAN P A	13	CHELIDZE T YA	45
	ARAKELIAN S M	42	BATYRBEKOV G A	8	BOKHOV A F	70	CHEREK H	22
	AREF'YEV V N	40	BAUER R K	22	BOKUT' B V	24,30	CHEREZOV V M	13
	ARESHEV I P	3	BAYBORODIN YU V	80	BOLDYREV S A	19	CHERNOV P V	38
	ARISTOV YE M	57	BAYDA L I	45	BOL'SHOV L A	68	CHERNOV V D	78
	ARKHIPOV V I	73			BONCH-BRUYEVICH A M	42	CHEERNYKH D F	50
	ARSENOVICI L C	70			BORISOV V I	66,72	CHEERNYKH V A	40
	ARTEMOV V A	57			BORMAN V D	37	CHEERNYSHEV A I	1
	ARTYUKH YU N	57			BORODZIUK S	33	CHEERNYSHEV A I	53
					BORONKOVA G I	75	CHEYNOKOV YE N	64
					BOROVICH L N	21	CHEYDO'G P	5

AD-A070 763

DEFENSE INTELLIGENCE AGENCY WASHINGTON DC
BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS. NUMBER 29. MAY-JUNE --ETC(U)
AUG 78

F/G 20/5

UNCLASSIFIED

DIA-DST-1740Z-003-78

NI

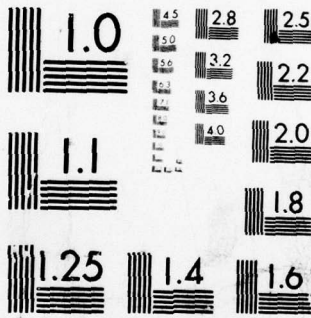
2 of 2

AD
A070763



END
DATE
FILMED

8--79
DDC



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

CHICHINADZE V V	45	DMITRIYEV A K	7	FEDIN V P	55	GERBENZON YE M	59
CHIKHLADZE O A	25	DMITRIYEV G A	59	FEDOROV G M	72	GERBUN V V	2
CHIKIN YE V	28	DNIPROVSKIY V S	32	FEDOROV M V	34	GERBUNSHTEYN N YE	33
CHILINGARYAN YU S	42	DOBZHANSKIY G F	65	FEDOROV V A	47	GERUNI P M	59
CHIRKIN A S	55, 56	DOLGIKH V A	14	FEDOROV YE A	1	GIDELEY A I	32
CHIRKOV L YE	22	DOLGOPOLOV S G	25	FEDOROV YU K	5	GIBIN I S	43
CHIRKOV V A	74	DOMIN YU S	7, 25, 55	FEDOTOV S I	75, 78	GIBEVICH G R	5
CHOMAT M	44	DOMIN V I	54	FEDOTOV V G	67	GINZBURG S A	22
CHOPORNYAK D B	72	DOROFYEV V G	73	FEDTISTOV A I	63	GINZBURG V M	46
CHUGUNOV A YU	9	DOTSSENKO A V	59	FERBER S B	67	GITIB S S	67
CHUKICHEV H V	64	DOVGER L S	1	FILIPENKO O S	25	GLAZER A S	43
CHUMASH V N	32	DRABOVICH K N	24	FILONENKO A D	42, 73	GLUBHKOV A S	44
CHURAKOV V V	.10, 11	DRAGULINESCU D	9	FILONENKO A A	34, 80	GLUBHKOV M V	2
COJOCARU E	75	DRAMPYAN R KH	68	FINKEL V M	71	GNATYUK L N	45
CSILLAG L	34	DRUKOV V I	55	FISHER R	26	GNENKO L P	33, 80
CUCHY Z	66	DUBNISHCHEV YU M	58	FISERA O	66	GOL'BERG I YE	60
CZECHOWICZ R	18	DUBOVIK A N	24	FIVEYSKIY YU D	72	GOL'DENBERG A B	53
CZEKAJ J	77	DUBOVSKIY P YE	12	FOFANOV YA A	8	GOL'DORT V G	7
		DUBYANSKIY V A	13	FOLIN K G	1	GOLGER A L	8
		DUDENKOVA A V	21	FONENKO B A	60	GOLOVANEVSKIY E I	60
		DUDOROV V N	43	FONINSKIY L P	28	GOLOVEY M I	69
		DUL'NEVA YE G	12	FRADKOV A B	78	GOLOVICHEV V I	17
		DUNITRAS D C	29	FRANKOV A A	38	GOLOVIN YU I	71
		DUTOV A I	31	FRANKUK A A	1	GOLOVYANKO A A	66
DANEIYUS R	26	D'YACHENKO N G	8	FRANCHUK A A	57	GOLUBEV S G	72
DANILEYKO M V	55, 59	DYADYUSHKIN P I	53	FRULOV H P	63	GOLUBEV V G	66
DANILOV A YE	75	D'YAKONOV A M	73	FROLOV M P	5	GOLUBEV V S	76
DANILOV N K	59	D'YAKOV YU YE	22	FROZEL V A	77	GOLUBEVA N S	35
DANILOV S V	1	DYATLOV M K	26, 27	FRUCZEK M	77	GOLUBNICHY P I	42, 73
DANILYCHEV V A	8, 9, 12, 14	D'YATLOV A S	13		0	GOLUBTSOV V V	53
DARZNEK S A	80	DYHENKO N N	7	GABRIYEL'YAN V T	24	GOLYAYEV YU D	2
DATSKEVICH N P	9	DZHIBLADZE M I	65	GACEK A	75	GONCHARENKO A M	80
DAVYDOV G V	70	DZHOTYAN G P	4	GALANT YE I	2	GONCHARENKO S YA	62
DAVYDOV V S	24	E	26, 27	GALACHYAN G A	5	GORDAN' I S	67
DAVYDOVA I N	46	EFENDIYEV T BH		GALICH G A	15	GORDIYETS B F	53
DEGTYAREV A G	14	EPHSHTYEN L Z	32	GALUS B V	33	GORDOV YE P	35
DEGTYAREV V G	65	EPHSHTYEN M I	71	GALUS M	21	GORELENKO A YA	23
DEMCHEENKO N N	75	ESIASHVILI Z G	56	GANIN V M	59	GORELIK V S	67
DEMENT'YEV V A	34	EYKHAL'D A I	4	GAPONOV S V	76	GORSHKOV V V	65
DEMEYUK YE T	14	F	69	GASE R	28	GORYNYA L M	67
DEMIDENKO Z A	46	FADEYEV V V		GASTOR B	20	GORYNYA V A	67
DENISOV L K	6	FANNIBO A K	1	GAYDACHUK B YE	20	GOSPODINOV G A	63
DENUS S	75, 77	FARBSHTEYN I I	37	GAYDAY YU A	59	GOVOR I N	55
DERENTOMICZ S	22, 46	FARKAS GY	22	GELASHVILI G V	66	GRASSHE M	21, 55
DERYUGIN I A	29	FAYENOV A YA	78	GENERALOV N A	45	GRASYUK A Z	27
DERYUGIN L N	53	FAYZULLOV F S	72	GENKIN V N	15	GRECHUSHNIKOV B N	65
DEVDAIANI A Z	37, 38, 66			GERASIMENKO N N	24, 52	GREGORKIEWICZ M	20
DIANOV YE M	40			GERASIMENKO V S	38	GREGOROV YU M	65
DIANOV-KLOKOV V I	55			GERASIMOVA I A	69	GRENSHIN A S	13
DIDYK L A	66				72	GREYSUKH G I	46
DIKAREV B N	26						
DIKCHYUS G	6						
DINKCHYAN K V	6						

GRIBOVSKIY V P	3	IONIN A A	12	KAPORSKIY L M	72	KICHERMAN L V	69
GRIGORIY C	9	ISAYEV A A	13, 16	KAPUSTIN A A	2	KIELESINSKI M	77
GRIGOR'YEV P G	74	ISHCHENKO S B	62	KARAPET'YAN M A	59	KIL'PID A V	5
GRIMBLATOV V N	23	ISYANDYA YE D	6	KARASEV V B	6	KIRILEV A YU	16
GRITSENKO M H	7	ITSKEVICH YE S	32	KARASIK A YA	71	KIRILLOV G A	14, 17
GRIVITSKAS V	31	IVAKIN YE V	2	KAREVA V A	29	KIRILEV V A	21, 48
GROZHNIK V A	58	IVANCHENKO A I	47	KARLIKOV D N	66	KISELEV V M	13
GRUSHETSKIY A V	67	IVANNIKOV YU A	11	KARLOV N V	73	KISELEVSKIY L I	18, 76
GRUSHNEVSKIY V B	2	IVANOV R S	60	KARLOVA YE K	9, 10, 52, 53	KITAY M S	52
GRUZ E A	67	IVANOV S G	9	KARPIKOVSKIY V YE	47	KLEJMAN H	30
GRYZINSKI M	77	IVANOV V V	58	KARPIUKHIN V T	9	KLEMENT'YEV V M	25
GUBA B S	4	IVANOV YU S	74	KASHKARDOV S S	75	KLER A	3
GUBEVICH S B	44	IVANOVA G K	65	KASK N YE	42	KLEVTSOV P V	2
GUDZENKO A I	29	IVANOVA T G	47	KAS'YAN V G	75	KLIMENKO I S	47, 48
GUDZENKO L I	15, 35, 76	IVANOV-OMSKIY V I	9	KATAYEV I O	72	KLIMENKO S M	37
GUETHER R	46	J	66	KAZAK N S	75	KLIMKIN V M	13
GUETTICH R	21	JACH K	29, 76, 77	KAZAK S G	13	KLIMONTOVICH YU L	28
GULEV V S	1	JANKIEWICZ Z	74, 77	KAZAKEVICH V S	9	KLINZO E F	44
GULYAYEV YU V	29	JANOWSKA B	47, 60	KAZARYAN M A	22	KLUZZIN V V	25, 29
GURAL' T I	68	JASIEWICZ M	38	KERIMOV O M	24, 30	KLYKOVSKIY O V	48
GURARI M L	45	JAZWINSKI H	9	KERNAZHIRSKIY L A	82	KLYSHKO D N	27, 30, 35
GUREVICH S B	46, 47, 80	JERZYKIEWICZ A	77	KEVORKOV A M	12	KLYUCHAREV A N	53
GUREVICH S G	44	K	47	KHACHATUROVA G T	16	KLYUCHINKOV V M	56
GURVICH A S	42	KABANOV M V	40, 41	KHADZHIMUKHAMEDOV KH KH	14	KLYUCHNIKOV A B	48
GUSAK P M	7	KACHANOV V	26	KHALEYEV M H	31	KOCHENOV V I	44
GUSEV M YE	23	KACHIBAYA V N	45	KHALIMANOVICH D M	6	KOCHETOV I V	9, 10
GYUZALYAN R N	4, 25	KACZHAREK F	25	KHAMZIN Z Z	35	KOENIG R	6
		KALACHEV A N	4, 30	KHANIN YA I	2	KOGAN B YA	73
		KALASHNIKOV N I	12	KHAPALYUK A P	67	KOKORA A N	71, 73
		KALININ V N	6	KHARTUNG K H	23	KOKURIN YU L	38
		KALININ YU A	73	KHASENOV H U	23	KOLESNIKOV A I	65
		KALINUSHKIN V P	55	KHAZANOV I V	60	KOLOBYANIN YU V	14
		KALISKI S	70	KHAYANOV B M	71	KOLOMIYETS B T	46, 47
		KAL'VINA I N	75, 76, 77, 78	KHARALYOV B M	33, 61	KOLOMIYSKIY YU R	8
		KALYUZHNYAYA G A	9	KHARTUNG K H	18	KOLOMIYKOV YU D	7
		KALYUZHNIY G S	2	KHATUNOV K M	67	KOL'TSOV V V	68
		KAMINSKAYA E G	73	KHASENOV H U	65	KOMPANYETS I N	43
		KAMINSKI B	67	KHAYANOV B M	8, 12	KONDILENKO I I	66
		KAMINSKIY A A	77	KHAYANOV B M	28	KONDRALENKO A M	48
		KAMINSKIY A YA	2, 31	KHAYANOV B M	28	KONEV YU B	9, 10
		KANTSIREV V L	67	KHAYANOV B M	60	KONIN K P	66
		KAPLAN A YE	74	KHAYANOV B M	39	KONONENKO I I	46
		KAPLYANSKIY A A	30	KHAYANOV B M	65	KONONOV N N	9
			56	KHAYANOV B M	52	KONONOV V A	71
				KHAYANOV B M	9	KONSTANTINOV V B	44
				KHAYANOV B M	24	KONYUKHOV V K	14
				KHAYANOV B M	44	KORBUKOV G YE	44, 48, 68, 80
				KHAYANOV B M	67	KOREN'KOV V I	74
				KHAYANOV B M	36	KORNER S B	34, 17
				KHAYANOV B M	66	KORNIYENKO L S	1, 38, 72
				KHAYANOV B M	1		

KOROKIN V V	32, 79	KURZIN A YU	45	LEBEDEV D S	49	MAK A A	4, 5, 24
KOROBOV V YE	5	KUKHTAREV N V	49, 51	LEBEDEV V I	1, 37	MAKAREVICH A M	18
KOROLENKO P V	18	KUKUSH V D	55	LEMANOV V V	23, 39	MAKAROV A A	3, 52
KOROLEV F A	7, 18	KULAKOV S V	23, 25, 80	LEMHERRMAN G YU	13	MAKAROV V M	14, 19
KOROLEV M A	9	KULIKOV V V	44, 48	LEMK H	61	MAKHVILADZE T H	32
KOROLEV V F	35	KULYUK L L	27	LEONOV YU S	17	MAKIN V S	73
KOROLEV YE A	1	KUMAVIN N I	5, 6	LEBHENYUK N S	31	MAKIYENKO E V	42
KORONKEVICH V P	58	KUND G G	52	LESNIKOV I V	31	MAKODON H M	23
KOROSTELEV V A	36	KUNISKIY A S	60	LETOKHOV V S	8, 52	MAKOVETSKAYA A P	67
KOROTEYEV N I	58	KUPRENYUK B F	10	LEUPOLD D	6	MAKONSKI J	77
KORZUN M	77	KUPRISHOV V F	19	LEVASHKEVICH L B	32	MAKSINOV A I	6
KOSCIEMSKI R	62	KUPRIYANOV N L	25	LEVCHENKO A S	8	MAKSINOV L A	33
KOSICHKIN YU V	2	KURAMIN YE I	18	LEVINA P I	49	MAKUKHA V K	32
KOSTANYAN R B	24	KURASHOV V N	55	LEVIT A L	32	MALAKHOV L N A	8
KOSTYLEV G D	48	KURBATOV YU A	49	LEVSUK L A	28	MALASHCHENKO A T	24
KOSTYSHIN M T	48	KUROCHKIN A P	9	LEWANDZKI L	38	MALASHKEVICH G YE	4, 20
KOSYNKIN V D	15	KURZYNSKI Z	60	LEZHAVA B S	4	MALDUTIS E K	72
KOTOV A V	27	KUSCH S	77	LIEMANN G	72	MALINOV M M	9
KOVACS K P	42	KUSNER YU S	46	LIEBKANSKIY V V	48	MALINA V	44
KOVAL'CHUK A S	6	KUTUKOV V B	54	LIKHANSKIY V V	18, 42	MALININ B G	5
KOVALENKO V S	71	KUTUKOVA YE A	43	LIPNIK V M	14	MAL'TSEVA I A	62
KOVALEV A A	32, 67	KUZIN A G	57	LITSITS A V S	61	MALYAVKIN L P	63
KOVALEV N M	44	KUZ'NENKO A V	23	LIVSHITS M G YA	74	MALYKH N I	61
KOVALEVSKIY V I	25	KUZ'NIN R N	49	LOBACHEVA G YA	39	MALYSHEV B N	37
KOVSH I B	8, 12	KUZNETSOV M I	9	LOBANOV A N	70	MALYUGIN A V	57
KOMALCZYK A	22	KUZNETSOV E P	33	LOBKIN V V	12	MALYUTENKO V K	68
KOMALSKI A	39	KUZNETSOV S P	33	LOGGINOV A S	52	MALYUTIN A A	5, 32
KOMALSKI S	77	KUZNETSOVA N A	61	LOKHOV YU N	3, 38	MAMONOV V K	43
KOZEL S M	33	KUZNETSOVA V V	24	LOKSHIN G R	72	MANDEL' V YE	53
KOZLOV N V	42	KVACHENOK N N	6	LOPASOV V P	33	MANYKIN A A	37
KOZUBOVSKIY V R	59	KNASHIENSKA D	4, 20	LORENZ U	41	MAN'KO M A	3
KOZYREV YU P	74, 75	L	18	LOSEV S A	55	MANYKIN E A	37
KRASNOV M M	37	LAKHO YU V	39	LOSEV V F	14	MARCHENKO S N	45
KRAVCHENKO V I	33	LAKOBA I S	8	LOTKOVA E N	12	MARCHENKO V S	10, 15, 76
KRAYTISOV N V	1	LAPINAA YU YU	15	LUBOVOY V M	12	MARDENOV M P	8
KREIBICH E	48	LAPTEV I D	39	LUGOVSKIY V K	26	MARININA L B	6
KREMLEV A N	3	LARIONTSEV YE G	65	LUGOVSKIY V P	23	MARKANO A O	14
KRIUL'KOV V A	62	LATYSH YE L	59	LUKIN V P	41	MARKELOV N A	61
KROKHIN O N	74	LATYSHEV A I	16	LUKOSHYUS Y P	40	MARKOV A N	78
KROPOTKIN M A	59	LAZAREV I R	44	LUSKIN V V	40	MARKOV V D	51
KROPOTOV G I	66	LAZAREV L E	81	LUSKIN B M	16	MARKOVA S V	13
KRSEK J	60	LAZENAS G L B	44	LYAKHOV G A	76	MARTYSHEV YU N	65
KRUCHININ N S	60	LAZNEVA E F	61	LYANOV V YE	58	MARTYSHEV O YE	55
KRUPITSKIY E I	48	LAZOVSKIY M YU	4	LYASHCHEV L M	29	MARYKIVSKIY O YE	33, 80
KRUYAKOVA V P	73	LEBEDEV A A	52	LYUBCHENKO V V	2	MASHKEVICH V S	57
KRYLOV K I	29, 67		35	LYUBIN V M	46, 47, 59	MASLOV L A	37
KRYNETSKIY B B	53, 70		61	MAGDICH L N	23	MATORIN I I	61
KUBAREV A V	55		52			MATYUGIN YU A	48
KUBICKI J	77		23			MATYUSHIN G A	25
KUDRYAVTSEVA I V	20		61				28

MAYOROV V P	69	MOROZOVA S B	19	NITICHKIN N A	14	PAN'KIM V G	29
MAYSTRENKO V I	44	MORY S	6	NITOI A	9	PANTELEYEV S V	14
MAZAN'KO I P	8	MOSKALENKO V F	9,12	NOBKOV D A	28	PAPYAN V A	22
MAZUR I P	67	MOSTALENKO V A	5	NOBKOV H A	23,24	PARYS P	77
MAZURENKO YU T	18	MOTSNIY, F V	62	NOVIKOV V YE	71	PASHININ P P	5,32
MEDVEDEV G N	14	MOTYLEV S L	78	NOVAK A	75	PASHUROV A YA	58
MELIK-SARKISYAN A A	6	MOVSESYAN H YE	68	NOVAKOVSKI M	29,74,77	PAVLYUK A A	2
MEL'NIK N N	69	MOVSESYAN R A	22	NOVIKOVSKI J	77	PAVLYUSHCHIK A A	3
MEL'NIKOV L A	16	MOVSEYAN A K	68	NOVISKI M	39	PECHURINA S V	12
MEL'NIKOV L S	28	MURADYAN A G	22	NURMUKHAMETOV R N	5,6	PEGOV V S	60
MEL'NIKOV N A	8	MURATIKOV K L	44	O		PELEKHATYY V H	21,40
MERZLYAKOV N S	49	MURINA T M	70	OBUKHOV A S	55	PEREKALINA Z B	76
MESHCHANKIN V H	46	MUSTAFIN K S	48	ODINTSOV A I	7,18	PEREKALINA Z B	65
MESHYATS G A	12	MYSHALOV P I	6	ODULOV S G	51	PERSAK T	21
METLINSKIY P N	61	N		OGURTSOVA L A		PERSHIN S M	26
MIKHAILESCU I N	73	NAATS I E	42	OKULOVA S H	62	PERSHIN S M	67
MIKHAEL'YAN A L	25	NABOYKIN YU V	2	OKUNISHNIKOV V N	57	PETROV M P	13,16
MIKHAILEVSKIY V S	16	NADEZHIN A D	16	OLZOYEV K F	42	PETROSYAN A G	2
MIKHAYLOV B S	71	NAGORNYY A G	61	ORAYEVSKIY A N	18,34,53,74	PETROSYAN S I	15
MIKHAYLOV S P	27	NAGRABA S	77	OREKHOV M V	70	PETROVA A G	44
MIKHAYLOV V P	50	NALIMOV I P	49	ORISHICH A M	28	PETROVA M D	51
MIKHAYLOV YU A	74,78	NAPARTOVICH A P	18,42	ORLOV V A	81	PETRU F	14
MIKHNOV S A	1,71	NARAY ZS	81	ORLOV V V	62	PETRUN'KIN V YU	19,62
MIKLASZEWSKI R	75	NAROVLYANSKAYA N M	7	ORLOV YE F	47	PEVGOV V G	9,10
MIKUTSKIS YU R YU	61	NARYSHKIN N F	23	ORLOVSKIY V H	9	PEVTSOV A B	65
MILENIN V V	63	NASIBOV A S	21	OSADCHEV L A	29	PEYSAKHSON I V	68
MILLER V A	2	NASTOYASHCHIY A F	78	OSINSKIY V I	81	PIKARNIKOV V P	23
MILLER V S	49	NAZARYAN A A	6	OSIPOV A I	53	PIKEL'NI V F	1
MILYUKOVA O P	41	NECHAYEVA T A	68	OSIPOV A P	11	PIKULIK L G	6
MILYUTIN YE R	18	NECHAYEVA T A	59	OSIPOV V V	9	PIKUZ S A	78
MIRINDYATOV M H	70	NEDAVNIY A P	9	OS' MINKINA K I	63	PINAYEVA M M	24
MIRKIN L I	70	NEDOSPASOV A V	67	OSTAPCHENKO YE P	8	PIOTROWSKI J	21,22
MIRLIN D N	27	NEKURASHCHEV V N	60	OSTROVSKIY A S	21,44	PIROGOV A YU	68
MIRONOV A B	5	NEMCHINOV I V	79	OVCHECHKIN A P	29,32	PIROGOV A YU	32
MIRONOV A N	10,35	NEMCHINOV I V	49	OVCHECHKIS YU N	52	PISKARSKAS A	26
MIRZAYEV AG T	35	NESHVELOVA L M	6	OVEZOV O B	58	PIS'MENNY V D	24
MIRZAYEV AS T	53	NESTERENKO T M	41	OVSPEYAN R K	58	PIS'MENNY V D	13
MISHIN V A	67	NEVDOLIN V N	18	OVSIS J	29	PIVINSKIY YE G	4
MITROFANOV A S	34	NEZHEVENKO YE S	65	P		PIVITSOV V S	1
MITROFANOV V B	39	NIKIFOROV S H	30	PACHUTA S		PLETNEV N V	4
MODEL' M D	7	NIKITIN V V	9	PADUCH M		PLONIKOV V G	4
MOGIL'NITSKIY B S	71	NIKITIN V YU	17,74	PAKHALOV V B	62	POCHERNYAYEV I M	54
MOISEYEV S S	51	NIKOLAYEV B I	38	PANCHENKO V YA	75	POCIECHA E	21,44
MOKEROV V G	23	NIKOLAYEV V D	33	PANFILOV V N	53,54	PODGAJETSKIY V M	62
MOKEROV V G	19	NIKULIN V I	60			PODGORNYI A P	20
MOLDAYSKAYA V H	13					PODGORNYI A P	2
MONASTYREV S S	61					PODLASKIN B G	44
MONUS K P	52					POGONIN V I	38
MOROZOV A O	24					POGOSYAN P S	24
MOROZOV I A						POGOSYAN V A	33

POKADOV V V	41	R	4	RUPASOV A A	74	SERDYUK N K	54
POKORA L	75			RUSINOVICZ T	77	SERDYUKOV V I	23
POLETAYEV M L	12			RUSKE R	50	SEROV R V	32,78
POLIZAROVA V N	24			RUSOV V M H I	55	SEVCHEKOV A M	54
POLIVANSKY YU N	54		54	RYABTSEV G I	3	SEVERIKOV V N	60
POLJOVITSKAYA B A	25		72	RYBALTOVSKIY A O	38	SHADEYEV N I	45
POLJUBIN V I	43		68	RYKHOV A F	58	SHAKHVERDOV P A	10
POLYAROVA A M	43		74	RZEWUSKI H	38	SHAKIN O V	23
POLZE S	19		11			SHAKIROV A KH	50
POMATH N E	28, 38, 31		50			SHALAGIN A M	16, 35
PONDARENKO A G	11, 28		51			SHALANOV S P	20
PONDARENKOV V I	25		21, 44	SADAGASHVILI M I	4	SHALDIN YU V	69
PONDARENKOV YU N	23		43	SADOMSKI H	75, 77	SHANICHEV G YA	2
PONDARENKOV A M	2		39	SAFINA Z SH	25	SHANSKIY V F	81
POPESCU I M	9		74	SAMERIN S M	40	SHAROV V F	18
POPOVIN V P	81		63	SALASHCHENKO N N	76	SHARLAY S F	29
POPOV S A	58		16	SAL'KOV YE A	69	SHARSHUNOV A G	63
POPOV V I	34		15	SAMARTSEV V V	68	SHCHAPKIN P V	21
POPOV YU M	21		29	SAMOKHIN A A	71	SHCHEGLOV V A	17
POPOVA M P	79		54	SAMOKHVALOV I V	42	SHCHELKUNOV K N	39
POPOVA T YA	48		54	SAPRYKIN P I	37	SHCHERBACHENKO A M	57
PORDINOV O YE	17		28	SARDKO V I	60	SHCHERBAKOV YE A	21, 40
PORDINOV N A	13		27	SARKAROV N E	18	SHCHERBAKOV YU M	43
POBUKH V G	20		82	SARKISYAN D G	4, 25	SHCHEVCHIK T I	39
POTAPOV A P	43		48	SARTANOV B G	75	SHCHEKIN YE R	43
PODOBRAZHENSKIY N G	16		53	SARZYNSKI A	75	SHELEPIN L A	32
PRESNYAKOV YU P	63		22	SAVITSKAYA V B	41	SHENDEROV YE L	50
PRIKLONSKIY A I	64		69	SAYAKHOV R SH	54	SHEPELENKO A A	11
PRILEZHAYEV D B	1		48	SAYAPIN G N	11	SHESTOBITOV V YE	19
PRILIPKO V K	65		58	SAZANOV V YE	44	SHEVCHENKO V P	57
PRIMACHENKO V YE	63		66	SAZHIN S M	60	SHEVELEVA A S	53
PRIVALOV V YE	8, 81		79	SCHEGLOV V A	53	SHEVKUNOVA T P	20
PRUDAN V D	3		46	SCHUBERT M	28	SHIGORIN D N	54
PRUDYNOV A B	13		59	SCHUBERT M M	30	SHIGORIN V D	25
PROBYNOV A G A	22		15	SCHUETTE F J	73	SHIKANOV L S	74
PROFILATOVA G A	9, 10, 21, 39		22, 50	SCHULZ G	50	SHILO V P	47
PROKHOROV A M	40, 53, 70		15, 31, 39	SECHKAREV A V	68	SHIROKOV A M	2
PROKHOROV M A	46		55	SEDENKOV YE G	60	SHISHLOV V I	41
PROKHOROV V G	48		35	SEDOV B M	1, 4	SHKARDIN G N	29
PROKOPCHUK L F	69		50	SELEZNEV V A	48	SHKUNOV V V	27
PROKOPENKO N D	82		3	SEM M F	16	SHMAL GAUZEN V I	64
PROKOP'YEV V YE	13		47	SEMENENKO L V	63	SHMAYENOK L A	65
PROZOROV V N	37		5, 32	SEMOV A V	25	SHMIT O A	67
PRUSS-ZHUKOVSKIY S V	23		10	SEMOV A YE	68	SHROYLOV N F	57
PRZHIBEL'SKIY S G	64		38	SEMOV E G	63	SHPAK M T	58, 59
PSHENICHNYI V I	71		6, 7	SEMOV G I	50	SHPAN'ON P A	56
PUGNIN V I	11		58	SEMOV YE P	11	SHRETER YU G	66
PUSTOVALOV V V	74		61, 62	SEMIBALAMUT V M	32	SHYAN'KO A YE	63
PUZEMICZ Z	18		45	SEMINDZHENKO V P	71	SHUBADEYEVA L P	79
PYATOSIN V YE	54			SENATSKIY YU V	4, 34	SHURYATSKIY P S	7, 25, 55

SHVARTS K K	49	SOLOMKO A A	64	SVITASHEV K K	39, 63	TSYBUL'NIKOV B A	51, 82
SHVERIN-KASHIN V B	57	SOLDUKHIN R I	11	SMIERCZYNSKI R	76	TUCHIN V V	16
SIDOROVICH V G	51	SOLOV'YANCHIK D A	10	SYCHUGOV V A	39, 48	TUMANDOV O A	8
SIDOROVICH V P	48	SOLOV'YEV K M	54	SYT'KO L V	67	TUNDYREV A A	65
SILIN V P	74	SOLOV'YEV V S	55	SZYDLAK J	77	TURKEVICH YU G	46
SIL'KITS E G	63	SOLOV'YEV V YE	3, 38	SZYBLOWSKA J	47, 68	TURKOV YU G	25
SIL'NITSKIY A F	19	SOLYANIK A S	56	SZYPULA W	29, 77	TUROVSKAYA T S	72
SIMONOV A P	1	SONIN A S	54	T		TVERDOKHLEB P YE	43
SINITSYN I G	32	SOPIN A I	4	TAKTAKISHVILI M I		TYAGAY V A	41
SINYAKOV V V	9	SOROKA V V	23	TALENSKIY O N	45	TYCHINA I I	63
SINYAKOV YE V	23	SOROKIN G I	44	TAMANIS M YA	21	TYRYSHKIN I S	67
SIROVIN G F	29	SOSKIN M S	33, 51	TARASENKO V F	67	TYRZIU V G	41
SITSEVAYA L A	5	SOTIN V YE	29	TARATORKIN B S	12	TYURIN A V	61
SIZOV F F	69	SPEKTOR B I	39	TARNOPOL'SKIY B L	57	U	53
SIZOV N I	48	SPIKHAL'SKIY A A	39, 40	TATARENKOV V M	25	UDREA M V	75
SKLADANOVSKI Z	75	SPOLACZYK R	51	TATARENKOV V M	7, 25, 55	UGLOV A A	70, 73, 74
SKLIZKOV G V	74, 75, 78	SPORNIK N M	52	TATARSKIY V A	19	UMAROV G YA	35
SKLYARENKO I YA	48	STANKEVICH V S	41	TATU V S	73	URLIN V D	14
SKREBOV V M	69	STARIKOV A D	79	TAVASIYEV A F	52	USMANOV AK G	68
SKRINSKIY A N	48	STARUNOV V S	4	TELESNIN R V	73	UTKIN YE N	58
SKROTSKIY G V	47	STAVROV A A	70	TEODORESCU V S	4, 25	UZAKOV A A	35
SKUVBIN B G	1	STEFANOV S R	63	TER-NIKAELYAN H L			
SLAVNOVA T D	5	STEFANOV V Y	70	TIKHONCHUK V T	74		
SLETKOV A A	71	STEFANOVICH V A	6, 14	TIKHONOV YE A	72		
SLIVKA V YU	69	STEL'MAKH M F	69	TIMONOV YE A	7, 69		
SLIVA L	38	STEPANOV A A	37	TIMOFEYEV B A	16		
SMIRNOV D F	31	STEPANOV A I	17, 53	TISHCHENKO A A	29		
SMIRNOV G H	31	STEPANOV B I	5	TISHCHENKO V N	11		
SMIRNOV V G	27	STEPANOV B H	10, 11	TITOV R A	56		
SMIRNOV V N	73	STERLIGOV V L	45, 56	TKAVASHVILI E SH	4		
SMIRNOV V S	32	STIBITZ V	8, 10	TOKAREVA A N	19		
SMIRNOVA I H	52	STOLPOVSKIY YE N	82	TOLKACHEV V A	4		
SMIRNOVA T N	69	STOTSKIY G I	19	TOLSTOV V F	19		
SMOLOVICH A M	51	STRAKHOV V P	57	TOMASHEVICH YU V	23		
SMODINA M S	45	STREKLOV G M	9	TREPAKOV V A	50		
SMYBLOV YE F	70	STRUNIN V P	3	TRIBEL'SKIY M I	24		
SMITKO O V	63	SUCHKOV A F	40	TROSHIN A S	6		
SNOPKO V N	76	SUKHAREV B V	54	TRUSHIN S A	65		
SOBEL'MAN I I	76	SUKHAREV S A	12	TRUSHKIN A V	20		
SOBOL' R M	49	SUKHODOL'SKIY A T	38	TSAYTUNSKIY V V	64		
SOBOLEV V A	12	SUYAZOV N V	16	TSERNIKOV V M	31		
SOBULEV V S	57	SVERDLOV B M	3	VELCULESCU V G	10, 11		
SOBSTEL' G M	57	SVESHNIKOVA L L	54	VELETSKAS D	49		
SOKOLOV A V	40	SVIRIDENKOV E A	64	VELOTSKIY A V	69		
SOKOLOV I V	31	SVIRIDOV M V	16	VELOTSKIY V V	71		
SOKOLOV S A	38	SVIRIDOV V V	3	VEYDENBAKH V A	38		
SOKOLOV V K	39	SVIRIDOV V V	54	VILETSOV F I	45, 47		
SOKOLOV V V	52	SVIRKO YU P	63	VINETSKIY V L	69		
SOLDATKINA L I	22		8	VINOGRADOV AN V	4		
SOLODOV I YU	58		50	VINOGRADOV YE A	44		
			16		54		

VINOGRADSKAYA N P					
VINKUROV G N					
VLASOV M A	61				
VLASOV N G	39				
VLASOV R A	78				
VLOKH O G	51, 79				
VODOP'YANOV K L	69				
VOELCKEL H	32				
VOLGIN V I	21				
VOLKOV I V	71				
VOLKOVITSKIY O A	63				
VOLOSOV V D	43				
VOL'SKAYA S P	25				
VOL'VACHEV G T	11				
VOROB'YEV A A	31				
VOROB'YEV S A	22				
VOROB'YEV V V	1				
VORONIN S P	5				
VORONKOV V V	24				
VORONTSOV M A	70				
VORONTSOV S S	64				
VORONTSOVA L A	11, 56				
VOSTRIKOV A A	64				
VOYTOVICH A P	54				
VYATCHANIN S P	3, 16				
VYLEGZHANIN D N	36				
VYSKUBENKO B A	31				
	14				
W					
WAMER J	77				
WILHELM B	56				
WODNICKI R	77				
WOLINSKI J	39				
WOLOWSKI J	75, 77				
WOLSKI J	77				
WREMBEL H Z	64				
WROZ T	64				
Y					
YAGHUROV V KH					
YAKHKIND E Z	1				
YAKOVLENKO S I	22				
YAKOVLEV N YE	15, 35, 76				
YAKOVLEV V P	41				
YAKOVLEV YU M	3				
YALANOV YU I	16				
YAMPOL'SKIY YE S	43				
YARICHIN YE M	61				
	45				
YARONEMKO O I					
YARDOLAVSKIY L P					
YASEN' A I					
YASHUKOV I V					
YATSENKO L P					
YEFIMKOV V F					
YEGIYAN K A					
YEGOROV A V					
YEGOROV V B					
YELESIN V F					
YELISEYEV P G					
YELIZAROVA T G					
YEMEL'YANOV V I					
YERMAKOV B A					
YERMAKOV O N					
YERSHOV G H					
YERSHOV L S					
YERSHOV O A					
YESAYAN YU V					
YESEPKINA N A					
YESKIN N I					
YEVSEYEV A R					
YEVSTIGNEYEV V V					
YEVTYUKHOV K N					
YEZHOV V A					
YEZHOV V I					
YUDINTSEV YE M					
YUREVICH V A					
YUSHIN M K					
YUSHKO K B					
Z					
ZABELLO YE I					
ZABIYAKIN YU YE					
ZABORTSEVA T A					
ZABUZOV S A					
ZADRAZIL M					
ZAGIDULLIN R SH					
ZAKHARCHENYA B P					
ZAKHAROV A S					
ZAKHAROV B V					
ZAKHAROV V P					
ZAKOTETEVA I M					
ZALESKIY V YU					
ZAKHOV A V					
ZAKHADOVOROV P N					
ZAPOL'SKIY A F					
ZAPOROZHCHENKO V A					
ZARUBA I					
ZARUTSKIY M A					
ZAVOORODNEVA S I					
ZAYTSEV L N					
ZAYTSEV P P					
ZEL'DOVICH B YA					
ZELENOV A A					
ZENSKIY V I					
ZENSKOV YE M					
ZENCHENKO S A					
ZEYLIKOVICH I S					
ZHARINOV A V					
ZHIBLINSKIY A G					
ZHILEVSKIY A I					
ZHUKOV A A					
ZHUKOV V V					
ZHUKOVSKIY V V					
ZHURAVEL' F A					
ZHVAVY S P					
ZIMAKOV V P					
ZIMIN D B					
ZINCHENKO V I					
ZINOV'YEV YU S					
ZLENKO A A					
ZMIYEVSKIY G N					
ZOLOTOV YE M					
ZUBAREV I G					
ZUBAREV T N					
ZUBOV B V					
ZUYEV V YE					
ZVORYKIN V D					
ZYKOV L I					
7	49	49	49	49	49
1	3	3	3	3	3
3	57	57	57	57	57
57	27	27	27	27	27
11	58	58	58	58	58
78	21	21	21	21	21
26	11	11	11	11	11
39	3	3	3	3	3
52	3, 88	3, 88	3, 88	3, 88	3, 88
78	34	34	34	34	34
58	28, 36	28, 36	28, 36	28, 36	28, 36
71	2	2	2	2	2
16	64	64	64	64	64
78	36	36	36	36	36
58	26	26	26	26	26
79	60	60	60	60	60
15	58	58	58	58	58
60	23	23	23	23	23
72	33	33	33	33	33
50	64	64	64	64	64
40	15	15	15	15	15
8	43	43	43	43	43
21, 40	25	25	25	25	25
27	11	11	11	11	11
34	1	1	1	1	1
70	45	45	45	45	45
41, 42	17	17	17	17	17
9					
17					
7					
39					
8					
29					
66					
36					
70					
11					
39					
1, 69					
51					
26					
28					
19					
17					
32					
44					
61					
39					
78					
51, 79					
69					
32					
21					
71					
63					
43					
25					
11					
31					
22					
1					
5					
24					
70					
64					
11, 56					
64					
54					
3, 16					
36					
31					
14					
77					
56					
77					
39					
75, 77					
77					
64					
64					
1					
22					
15, 35, 76					
41					
3					
16					
43					
61					
45					