

# Владимир Георгиевич Миногин



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25 августа 2014 года после болезни скончался главный научный сотрудник лаборатории лазерной спектроскопии Института спектроскопии РАН (ИСАН), доктор физико-математических наук, профессор **Владимир Георгиевич Миногин**.

В.Г. Миногин специалист в области лазерной спектроскопии и теории лазерного охлаждения.

Разделы специализации: атомная, молекулярная и оптическая физика; квантовая оптика; лазерная спектроскопия; атомная и электронная оптика; нанооптика; лазерная физика.

Владимир Георгиевич Миногин окончил Московский физико-технический институт (1973 г.); Кандидат технических наук (1978 г.); Доктор наук (1988 г.); Профессор теоретической и математической физики (1992 г.).

Студентом 5 курса МИФИ В.Г. Миногин пришел в отдел лазерной спектроскопии ИСАН. В 1978 году защитил диссертацию кандидата физико-математических наук по теме: «Некоторые вопросы нелинейной лазерной спектроскопии атомов и ядер». В 1986 году защитил докторскую диссертацию по теме: «Давление резонансного лазерного излучения на атомы». В отделе лазерной спектроскопии ИСАН Владимир Георгиевич успешно проработал в области лазерной физики более 40 лет.

В.Г. Миногин - признанный классик в теории лазерного охлаждения. Его книга, написанная совместно с В.С. Летоховым "Давление лазерного излучения на атомы" является настольной для студентов многих университетов мира. В 2001 году за цикл работ "Лазерное охлаждение и захват атомов" ему была присуждена премия имени Д.С. Рождественского.

В 70х годах В.Г. Миногин участвовал в работах группы В.С. Летохова по лазерному охлаждению атомов. В ключевой работе В.С. Летохова, В.Г. Миногина и Б.Д. Павлика COOLING AND TRAPPING OF ATOMS AND MOLECULES BY A RESONANT LASER FIELD (Optics Communications, 1976) описан метод одновременного охлаждения и захвата атомов и молекул в газе низкого давления под действием сил, вызванных отдачей во время спонтанных или индуцированных переходов частиц в резонансное поле трехмерной стоячей световой волны. В тот же период в мире возникло несколько научных групп, занимающихся разработкой новых методов охлаждения и захвата атомов с помощью лазерного излучения, появились даже результаты, отмеченные Нобелевской премией (<https://www.nkj.ru/archive/articles/10172/>).

Владимир Георгиевич был замечательным человеком, талантливым ученым и педагогом, для которого физика стала не только профессией, но и настоящим призванием. Он сотрудничал со многими университетами Европы и Азии. Высочайший профессионализм, широкие познания во многих областях науки, интеллигентность, дружелюбие, улыбчивость, невозмутимость принесли ему заслуженное уважение всех тех, кто его знал.

В.Г. Миногин похоронен в Москве на Пятницком кладбище (Колумбарий, секц. 32).

*Источник:*

[https://isan.troitsk.ru/ru/news.php?news\\_id=133](https://isan.troitsk.ru/ru/news.php?news_id=133)

## Список основных научных публикаций В.Г. Миногина

### Книги

1. МИНОГИН В.Г., ЛЕТОХОВ В.С. ДАВЛЕНИЕ ЛАЗЕРНОГО ИЗЛУЧЕНИЯ НА АТОМЫ. - М.: НАУКА, 1986. - 221,[1] СС.

### Статьи

2. MASALOV, AV; MINOGIN, VG.  
SPONTANEOUS DECAY RATES OF THE HYPERFINE STRUCTURE ATOMIC STATES INTO AN OPTICAL NANOFIBER  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 118(5), 714-722 (2014)
3. MINOGIN, VG.  
NATURAL GEOMETRIC REPRESENTATION FOR ELECTRON LOCAL OBSERVABLES  
ANNALS OF PHYSICS 342, 1-10 (2014)
4. ASEEV, SA; MIRONOV, BN; CHEKALIN, SV; MINOGIN, VG.  
FORMATION OF ULTRASHORT ELECTRON PULSES IN AN ELECTROSTATIC LASER REFLECTRON-DEFLECTOR  
QUANTUM ELECTRONICS 44(3), 259-262 (2014)
5. MASALOV, AV; MINOGIN, VG.  
PUMPING OF HIGHER-ORDER MODES OF AN OPTICAL NANOFIBER BY LASER EXCITED ATOMS  
LASER PHYSICS LETTERS 10(7), - (2013)

6. ASEYEV, SA; MIRONOV, BN; MINOGIN, VG; CHERKUN, AP; CHEKALIN, SV.  
MICROSCOPY OF PHOTOIONISATION PROCESSES  
QUANTUM ELECTRONICS 43(4), 308-312 (2013)
7. ASEYEV, SA; MINOGIN, VG; MIRONOV, BN.  
PROJECTION MICROSCOPY OF PHOTOIONIZATION PROCESSES IN GASES  
APPLIED PHYSICS B-LASERS AND OPTICS 108(4), 755-759 (2012)
8. FRAWLEY, MC; CHORMAIC, SN; MINOGIN, VG.  
THE VAN DER WAALS INTERACTION OF AN ATOM WITH THE CONVEX SURFACE OF A NANOCYLINDER  
PHYSICA SCRIPTA 85(5), - (2012) MINOGIN, VG.  
IDENTITIES FOR THE ELECTRON FORMS 2 AND THEIR 3D REPRESENTATION  
ANNALS OF PHYSICS 327(3), 823-840 (2012)
9. MINOGIN, VG.  
GEOMETRY OF THE ELECTRON LOCAL OBSERVABLES  
ANNALS OF PHYSICS 326(10), 2773-2792 (2011)
10. ASEYEV, SA; MIRONOV, BN; MINOGIN, VG; CHEKALIN, SV.  
MEASUREMENT OF THE GAPONOV-MILLER FORCE PRODUCED IN VACUUM BY TIGHTLY FOCUSED INTENSE FEMTOSECOND LASER RADIATION  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 112(5), 780-783 (2011)
11. SCHMIDT, R; CHORMAIC, SN; MINOGIN, VG.  
VAN DER WAALS INTERACTION OF A NEUTRAL ATOM WITH THE SURFACE OF A METAL OR DIELECTRIC NANOSPHERE  
JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS 44(1), - (2011)
12. ASEYEV, SA; MIRONOV, BN; MINOGIN, VG; CHEKALIN, SV.  
ULTRAFAST MICROLOCALIZED PHOTOELECTRON BUNCHES: FORMATION AND APPLICATIONS  
ICONO 2010: INTERNATIONAL CONFERENCE ON COHERENT AND NONLINEAR OPTICS 7993, - (2011)
13. AFANASIEV, A; MINOGIN, V.  
VAN DER WAALS INTERACTION OF AN ATOM WITH THE INTERNAL SURFACE OF A HOLLOW SUBMICROMETER-SIZE CYLINDER  
PHYSICAL REVIEW A 82(5), - (2010)
14. ASEEV, SA; MINOGIN, VG; MIRONOV, BN; CHEKALIN, SV.  
CONTROL OVER THE SPACE-TIME STRUCTURE OF ELECTRON BEAMS BY HIGH-INTENSITY FEMTOSECOND LASER RADIATION  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 111(5), 707-713 (2010)
15. WU, YQ; WARD, JM; MINOGIN, VG; CHORMAIC, SN.  
TRAPPING OF A MICROSPHERE PENDULUM THROUGH CAVITY-ENHANCED OPTICAL FORCES  
PHYSICA SCRIPTA T140, - (2010)
16. MINOGIN, VG; CHORMAIC, SN.  
MANIFESTATION OF THE VAN DER WAALS SURFACE INTERACTION IN THE SPONTANEOUS EMISSION OF ATOMS INTO AN OPTICAL NANOFIBER  
LASER PHYSICS 20(1), 32-37 (2010)
17. ASEEV, S.A.; MIRONOV, B.N.; MINOGIN, V.G.; CHEKALIN, S.V..  
DEVELOPING METHODS FOR OBSERVING PROCESSES INDUCED BY FEMTOSECOND LASER PULSES WITH HIGH SPATIOTEMPORAL RESOLUTION  
BULLETIN OF THE RUSSIAN ACADEMY OF SCIENCES. PHYSICS 74(7), 931 (2010)
18. RUSSELL, L; GLEESON, DA; MINOGIN, VG; CHORMAIC, SN.  
SPECTRAL DISTRIBUTION OF ATOMIC FLUORESCENCE COUPLED INTO AN OPTICAL NANOFIBRE  
JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS 42(18), - (2009)
19. ASEEV, SA; MIRONOV, BN; MINOGIN, VG; CHEKALIN, SV; LETOKHOV, VS.  
VISUALIZATION OF THE SPATIO-TEMPORAL STRUCTURE OF A PULSED PHOTOELECTRON BEAM FORMED BY FEMTOSECOND LASER RADIATION  
JETP LETTERS 90(1), 13-17 (2009)

20. WARD, JM; WU, Y; MINOGIN, VG; CHORMAIC, SN.  
TRAPPING OF A MICROSPHERE PENDULUM RESONATOR IN AN OPTICAL POTENTIAL  
PHYSICAL REVIEW A 79(5), - (2009)
21. MINOGIN, VG.  
ELECTRON BEAM DEFLECTION, FOCUSING, AND COLLIMATION BY A FEMTOSECOND LASER LENS  
QUANTUM ELECTRONICS 39(11), 1095-1098 (2009)
22. BANDI, TN; MINOGIN, VG; CHORMAIC, SN.  
ATOM MICROTRAPS BASED ON NEAR-FIELD FRESNEL DIFFRACTION  
PHYSICAL REVIEW A 78(1), - (2008)
23. MIRONOV, BN; ASEEV, SA; MINOGIN, VG; CHEKALIN, SV.  
FORMATION OF AN ELECTRON BEAM WITH A DURATION SHORTER THAN 100 FS DURING  
PHOTOEMISSION OF ELECTRONS BY FEMTOSECOND LASER PULSES  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 106(6), 1007-1012 (2008)
24. BALYKIN, VI; MINOGIN, VG.  
FOCUSING OF ATOMIC BEAMS BY NEAR-FIELD ATOM MICROLENSES: THE BETHE-TYPE AND THE  
FRESNEL-TYPE MICROLENSES  
PHYSICAL REVIEW A 77(1), - (2008)
25. CHOI, SK; PARK, SE; CHEN, J; MINOGIN, VG.  
THREE-DIMENSIONAL ANALYSIS OF THE MAGNETO-OPTICAL TRAP FOR (1+3)-LEVEL ATOMS  
PHYSICAL REVIEW A 77(1), - (2008)
26. GLEESON, D; MINOGIN, V; MORRISSEY, M; DEASY, K; BANDI, T; CHORMAIC, SN.  
ATOMIC FLUORESCENCE EMITTED INTO AN OPTICAL NANOFIBER: COUPLING EFFICIENCY AND  
SPECTRUM  
2008 CONFERENCE ON LASERS AND ELECTRO-OPTICS & QUANTUM ELECTRONICS AND LASER  
SCIENCE CONFERENCE, VOLS 1-9 , 2121-+ (2008)
27. BALYKIN, VI; MINOGIN, VG.  
FOCUSING OF AN ATOMIC BEAM BY A FRESNEL ATOM MICROLENS  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 105(3), 479-485 (2007)
28. BALYKIN, VI; MINOGIN, VG; RUDNEV, SN.  
ATOMIC BEAM FOCUSING BY A NEAR-FIELD ATOMIC MICROLENS  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 103(5), 679-689 (2006)
29. AN, SJ; BAE, J; MINOGIN, VG; KWON, O.  
CURRENT-DEPENDENT SPECTRAL BLUESHIFT IN A THREE-DIMENSIONAL PHOTONIC-QUANTUM-  
RING LASER  
APPLIED OPTICS 45(8), 1820-1824 (2006)
30. AN, SJ; YOON, J; LEE, J; KWON, O; MINOGIN, VG.  
SPECTRAL ANALYSIS OF A THREE-DIMENSIONAL PHOTONIC QUANTUM RING LASER WITH A  
SQUARE MICROCAVITY  
JOURNAL OF APPLIED PHYSICS 99(3), - (2006)
31. BAE, J; LEE, J; KWON, O; MINOGIN, VG.  
SPECTRUM OF THREE-DIMENSIONAL PHOTONIC QUANTUM-RING MICRODISK CAVITIES:  
COMPARISON BETWEEN THEORY AND EXPERIMENT  
OPTICS LETTERS 28(20), 1861-1863 (2003)
32. BALYKIN, VI; MINOGIN, VG.  
MAGNETOOPTICAL COMPRESSION OF ATOMIC BEAMS  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 96(1), 8-18 (2003)
33. LEE, HS; KWON, TY; KANG, HS; PARK, YH; OH, CH; PARK, SE; CHO, H; MINOGIN, VG.  
COMPARISON OF THE RABI AND RAMSEY PULLING IN AN OPTICALLY PUMPED CAESIUM-BEAM  
STANDARD  
METROLOGIA 40(5), 224-231 (2003)
34. CHANG, S; KWON, TY; LEE, HS; MINOGIN, VG.  
LASER SUB-DOPPLER COOLING OF ATOMS IN AN ARBITRARILY DIRECTED MAGNETIC FIELD  
PHYSICAL REVIEW A 66(4), - (2002)

35. CHANG, S; MINOGIN, V.  
DENSITY-MATRIX APPROACH TO DYNAMICS OF MULTILEVEL ATOMS IN LASER FIELDS  
PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS 365(2), 65-143 (2002)
36. KIM, K; NOH, HR; YEON, YH; MINOGIN, VG; JHE, W.  
COLD RUBIDIUM ATOMIC BEAM PRODUCED BY ZEEMAN-IMBALANCED RADIATION PRESSURES  
PHYSICAL REVIEW A 65(5), - (2002)
37. CHANG, S; KWON, TY; LEE, HS; MINOGIN, VG.  
COMPARISON OF MULTILEVEL ATOMIC SCHEMES FOR SUBDOPPLER LASER COOLING  
JOURNAL OF THE KOREAN PHYSICAL SOCIETY 39(5), 921-927 (2001)
38. JUN, JW; MINOGIN, VG.  
STABILITY OF THE FAR-OFF-RESONANCE DIPOLE-ATOM TRAP WITH SUPERIMPOSED LASER  
COOLING  
PHYSICAL REVIEW A 64(2), - (2001)
39. CHANG, S; KWON, TY; LEE, HS; MINOGIN, VG.  
COMPARISON OF TWO BASIC LASER-COOLING SCHEMES FOR MULTILEVEL ATOMS: LINEAR-  
LINEAR AND SIGMA(+)-SIGMA(-) CONFIGURATIONS  
PHYSICAL REVIEW A 64(2), - (2001)
40. CHANG, S; KWON, TY; LEE, HS; MINOGIN, VG.  
SUB-DOPPLER LASER COOLING OF ATOMS: COMPARISON OF FOUR MULTILEVEL ATOMIC  
SCHEMES  
PHYSICAL REVIEW A 64(1), - (2001)
41. JUN, JW; LEE, HS; KWON, TY; MINOGIN, VG.  
LIGHT SHIFT IN AN OPTICALLY PUMPED CAESIUM-BEAM FREQUENCY STANDARD  
METROLOGIA 38(3), 221-227 (2001)
42. GARRAWAY, BM; MINOGIN, VG.  
THEORY OF AN OPTICAL DIPOLE TRAP FOR COLD ATOMS  
PHYSICAL REVIEW A 62(4), - (2000)
43. BALYKIN, VI; MINOGIN, VG; LETOKHOV, VS.  
ELECTROMAGNETIC TRAPPING OF COLD ATOMS  
REPORTS ON PROGRESS IN PHYSICS 63(9), 1429-1510 (2000)
44. JUN, JW; CHANG, S; LEE, HS; MINOGIN, V; JHE, W.  
DOUBLE-STRUCTURE POTENTIAL DUE TO MULTIPHOTON PROCESSES IN A MAGNETO-OPTICAL  
TRAP  
PHYSICAL REVIEW A 60(6), 4738-4742 (1999)
45. XU, XY; MINOGIN, VG; LEE, K; WANG, YZ; JHE, WH.  
GUIDING COLD ATOMS IN A HOLLOW LASER BEAM  
PHYSICAL REVIEW A 60(6), 4796-4804 (1999)
46. JUN, JW; CHANG, S; KWON, TY; LEE, HS; MINOGIN, VG.  
KINETIC THEORY OF THE MAGNETO-OPTICAL TRAP FOR MULTILEVEL ATOMS  
PHYSICAL REVIEW A 60(5), 3960-3972 (1999)
47. CHANG, S; KWON, TY; LEE, HS; MINOGIN, VG.  
TWO-PHOTON LASER-COOLING MECHANISM IN MULTILEVEL INTERACTION SCHEMES  
PHYSICAL REVIEW A 60(4), 3148-3159 (1999)
48. CHANG, S; KWON, TY; LEE, HS; MINOGIN, V.  
LIGHT-INDUCED GROUND-STATE COHERENCE, CONSTRUCTIVE INTERFERENCE, AND TWO-  
PHOTON LASER COOLING MECHANISM IN MULTILEVEL ATOMS  
PHYSICAL REVIEW A 60(3), 2308-2311 (1999)
49. MINOGIN, VG; RICHMOND, JA; OPAT, GI.  
TIME-ORBITING-POTENTIAL QUADRUPOLE MAGNETIC TRAP FOR COLD ATOMS  
PHYSICAL REVIEW A 58(4), 3138-3145 (1998)
50. MINOGIN, VG; NIENHUIS, G.  
OPTICAL PUMPING OF VELOCITY-SELECTIVE COHERENT POPULATION TRAPPING STATES IN  
THREE-LEVEL ATOMS  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 87(2), 280-287 (1998)

51. MINOGIN, VG; SUBBOTIN, MV; MELENT'EV, PN.  
DYNAMICS OF COLD ATOMS IN A QUADRUPOLE MAGNETIC TRAP WITH AN ORBITING POTENTIAL  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS 87(1), 12-19 (1998)
52. MINOGIN, VG; FEDOROV, MV; LETOKHOV, VS.  
FORMATION OF ULTRASHORT ELECTRON PULSES ON SCATTERING OF AN ELECTRON BEAM BY A STANDING LASER WAVE OF ULTRASHORT DURATION  
OPTICS COMMUNICATIONS 140(4-6), 250-254 (1997)
53. MINOGIN, VG.  
ISOTOPIC SELECTIVITY OF THE OPTICAL PUMPING OF ATOMS BY FREQUENCY-CONTROLLED LASER RADIATION.  
KVANTOVAYA ELEKTRONIKA 23(9), 849-853 (1996)
54. OLSHANII, MA; MINOGIN, VG.  
3-DIMENSIONAL VELOCITY-SELECTIVE COHERENT POPULATION TRAPPING OF A (3+3)-LEVEL ATOM  
OPTICS COMMUNICATIONS 89(5-6), 393-398 (1992)
55. OL'SHANII, M.A.; LETOKHOV, V.S.; MINOGIN, V.G..  
ROLE OF INTERACTION TIME IN LIGHT PRESSURE FORCE ON ATOMS  
NONLINEAR OPTICS, PRINCIPLES, MATERIALS, PHENOMENA AND DEVICES 3(4), 283 (1992)
56. OLSHANII, MA; MINOGIN, VG.  
3-DIMENSIONAL VELOCITY-SELECTIVE COHERENT POPULATION TRAPPING OF (3+1)-LEVEL ATOMS  
QUANTUM OPTICS 3(6), 317-322 (1991)
57. MINOGIN, VG; ROZHDESTVENSKII, YV.  
COLLIMATION AND COMPRESSION OF ATOMIC-BEAMS BY HIGH-INTENSITY COUNTER WAVES  
ZHURNAL TEKHNICHESKOI FIZIKI 60(11), 38-46 (1990)
58. CHANG, S; GARRAWAY, BM; MINOGIN, VG.  
DYNAMICS OF 5-LEVEL ATOMS IN 2 STANDING ELECTROMAGNETIC-WAVES  
JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN 59(9), 3155-3166 (1990)
59. CHANG, S; GARRAWAY, BM; MINOGIN, VG.  
DEEP COOLING OF 3-LEVEL ATOMS IN 2 STANDING WAVES  
OPTICS COMMUNICATIONS 77(1), 19-25 (1990)
60. MINOGIN, VG; OLSHANYI, MA; ROZHDESTVENSKY, YV; YAKOBSON, NN.  
LASER COOLING OF ATOMS LOWER THE SINGLE-PHOTON CLASSICAL LIMIT  
OPTIKA I SPEKTROSKOPIYA 68(1), 51-53 (1990)
61. MINOGIN, VG; OLSHANY, MA; SHULGA, SU.  
LASER COOLING OF ATOMS BELOW THE SINGLE-PHOTON CLASSICAL LIMIT  
JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS 6(11), 2108-2111 (1989)
62. MINOGIN, VG; POPOV, AA.  
COMPRESSION OF ATOMIC-BEAMS BY AXISYMMETRIC PRESSURE OF LASER-EMISSION  
ZHURNAL TEKHNICHESKOI FIZIKI 59(8), 71-75 (1989)
63. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG.  
LASER CONTROL OF THE MOTION OF NEUTRAL ATOMS AND OPTICAL ATOMIC TRAPS  
PHYSICA SCRIPTA T22, 119-127 (1988)
64. MINOGIN, VG; ROZHDESTVENSKII, YV.  
STABLE LOCALIZATION OF ATOMS IN A STANDING LIGHT-WAVE FIELD  
OPTICS COMMUNICATIONS 64(2), 172-174 (1987)
65. MINOGIN, VG; ROZHDESTVENSKY, YV.  
STOCHASTIC DYNAMICS OF ATOMS IN THE FIELD OF PLANE LIGHT WAVES  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 93(4), 1173-1187 (1987)
66. MINOGIN, VG; ROZHDESTVENSKY, YV.  
STABLE LOCALIZATION OF ATOMS IN THE FIELD OF 2 STANDING LIGHT WAVES  
OPTIKA I SPEKTROSKOPIYA 63(2), 234-236 (1987)

67. MINOGIN, VG; ROZHDESTVENSKY, YV.  
STABILIZATION OF ATOMIC VELOCITIES BY RESONANCE-RADIATION PRESSURE  
OPTIKA I SPEKTROSKOPIYA 62(4), 920-922 (1987)
68. BAKLANOV, EV; MINOGIN, VG.  
SCATTERING OF WAVE PACKET OF AN ATOM BY A RESONANCE STANDING LIGHT-WAVE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 92(2), 417-431 (1987)
69. MINOGIN, VG; ROZHDESTVENSKY, YV.  
OPTICAL ACCUMULATION RING FOR ATOMS  
OPTIKA I SPEKTROSKOPIYA 61(5), 913-915 (1986)
70. MINOGIN, VG; NOVIKOV, VD.  
SESSION OF THE SCIENTIFIC COUNCIL OF THE ACADEMY-OF-SCIENCES-SSSR ON THE PROBLEMS  
OF COHERENT AND NONLINEAR OPTICS (TROIJSK, MOSCOW REGION, APRIL 23, 1986)  
KVANTOVAYA ELEKTRONIKA 13(10), 2155-2157 (1986)
71. MINOGIN, VG.  
COMPRESSION OF ATOMIC-BEAMS BY LASER-RADIATION PRESSURE  
OPTIKA I SPEKTROSKOPIYA 60(5), 1061-1064 (1986)
72. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG; ROZHDESTVENSKY, YV; SIDOROV, AI.  
COLLIMATION AND DECOLLIMATION OF ATOMIC-BEAMS BY LASER-RADIATION PRESSURE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 90(3), 871-880 (1986)
73. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG; SIDOROV, AI.  
INTENSIVE COLD ATOM BEAMS FOR LASER SPECTROSCOPY PROBLEMS  
IZVESTIYA AKADEMII NAUK SSSR SERIYA FIZICHESKAYA 49(3), 479-486 (1985)
74. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG; ROZHDESTVENSKY, YV; SIDOROV, AI.  
RADIATIVE COLLIMATION OF ATOMIC-BEAMS THROUGH TWO-DIMENSIONAL COOLING OF  
ATOMS BY LASER-RADIATION PRESSURE  
JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS 2(11), 1776-1783 (1985)
75. MINOGIN, VG.  
RESONANCE-RADIATION PRESSURE ON ATOMS IN SYMMETRICAL LIGHT FIELDS  
OPTICS LETTERS 10(4), 179-181 (1985)
76. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG.  
COOLING OF ATOMS BY LASER-RADIATION PRESSURE  
USPEKHI FIZICHESKIH NAUK 147(1), 117-156 (1985)
77. MINOGIN, VG; ROZHDESTVENSKY, YV.  
COHERENT TRAPPING OF ATOMIC POPULATIONS IN PROBLEMS OF RESONANT LIGHT PRESSURE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 88(6), 1950-1957 (1985)
78. MINOGIN, VG.  
NONLINEAR AND COHERENT PROPERTIES OF LASER-RADIATION PRESSURE ON ATOMS  
LECTURE NOTES IN PHYSICS 229, 259-272 (1985)
79. BALYKIN, V.I.; LETOKHOV, V.S.; MINOGIN, V.G..  
COOLING ATOMS BY MEANS OF LASER RADIATION PRESSURE  
SOVIET PHYSICS - USPEKHI 28(9), 803 (1985)
80. LETOKHOV, V.S.; MINOGIN, V.G..  
BASISES OF LASER SPECTROSCOPY  
SOV.PHYS.-USPEKHI 147(9), 79 (1985)
81. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG; ZUEVA, TV.  
COLLIMATION OF ATOMIC-BEAMS BY RESONANT LASER-RADIATION PRESSURE  
APPLIED PHYSICS B-PHOTOPHYSICS AND LASER CHEMISTRY 35(3), 149-153 (1984)
82. MINOGIN, VG; ROZHDESTVENSKY, YV.  
DYNAMICS OF A 3-LEVEL ATOM IN A RESONANT LIGHT-FIELD  
APPLIED PHYSICS B-PHOTOPHYSICS AND LASER CHEMISTRY 34(3), 161-166 (1984)
83. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG.  
ON THE POSSIBILITY OF HIGHLY SELECTIVE DETECTION OF RARE ISOTOPIC ATOMS BY MEANS OF  
RESONANT LASER-LIGHT PRESSURE  
APPLIED PHYSICS B-PHOTOPHYSICS AND LASER CHEMISTRY 33(4), 247-251 (1984)

84. MINOGIN, VG; ROZHDESTVENSKY, YV.  
MOTION OF A MULTILEVEL ATOM IN RESONANT LIGHT FIELDS  
OPTIKA I SPEKTROSKOPIYA 54(4), 623-629 (1983)
85. MINOGIN, VG; ROZHDESTVENSKIY, YV.  
RESONANT LIGHT PRESSURE ON ATOMIC PARTICLES OF THE INTERSTELLAR-MEDIUM  
ASTRONOMICHEKII ZHURNAL 60(4), 694-702 (1983)
86. MINOGIN, V.G.; ROZHDESTVENSKIY, YU.V..  
MOTION OF A MULTILEVEL ATOM IN RESONANCE LIGHT FIELDS  
OPTICS AND SPECTROSCOPY 54(4), 369 (1983)
87. MINOGIN, V.G.; ROZHDESTVENSKIY, YU.V..  
RESONANCE RADIATION PRESSURE ON INTERSTELLAR ATOMS  
SOVIET ASTRONOMY 27(4), 403 (1983)
88. MINOGIN, VG.  
THE THEORY OF THE RADIATIVE ATOMIC TRAP  
KVANTOVAYA ELEKTRONIKA 9(3), 505-513 (1982)
89. MINOGIN, VG; JAVANAINEN, J.  
A TETRAHEDRAL LIGHT PRESSURE TRAP FOR ATOMS  
OPTICS COMMUNICATIONS 43(2), 119-122 (1982)
90. MINOGIN, VG.  
MONOIONIC OSCILLATOR WITH A RADIATIVE COOLING  
USPEKHI FIZICHESKIH NAUK 137(1), 173-184 (1982)
91. ANDREEV, SV; BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG.  
RADIATIVE SLOWING DOWN AND MONOCHROMATIZATION OF SODIUM ATOMS BEAM IN A  
COUNTER-MOVING LASER-BEAM  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 82(5), 1429-1441 (1982)
92. MINOGIN, VG.  
LOCAL VELOCITY DISTRIBUTION IN PROBLEMS OF RESONANT RADIATION PRESSURE  
ZHURNAL TEKHNICHESKOI FIZIKI 52(10), 1905-1909 (1982)
93. MINOGIN, VG.  
RESONANCE LIGHT PRESSURE IN THE FIELD OF PARTIALLY COHERENT LASER-EMISSION  
OPTIKA I SPEKTROSKOPIYA 53(1), 125-129 (1982)
94. LETOKHOV, VS; MINOGIN, VG.  
LASER COOLING OF ATOMS AND ITS APPLICATION IN FREQUENCY STANDARDS  
JOURNAL DE PHYSIQUE 42(NC8), 347-355 (1981)
95. ANDREEV, SV; BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG.  
RADIATIVE SLOWING AND REDUCTION OF THE ENERGY SPREAD OF A BEAM OF SODIUM ATOMS  
TO 1.5 K IN AN OPPositELY DIRECTED LASER-BEAM  
JETP LETTERS 34(8), 442-445 (1981)
96. MINOGIN, VG; LETOKHOV, VS; ZUEVA, TV.  
HYDRODYNAMICAL EQUATIONS FOR ATOMIC MOTION IN A RESONANT LIGHT-WAVE  
OPTICS COMMUNICATIONS 38(3), 225-229 (1981)
97. MINOGIN, VG.  
ATOMIC-SCATTERING BY A RESONANT STANDING LIGHT-WAVE  
OPTICS COMMUNICATIONS 37(6), 442-446 (1981)
98. LETOKHOV, VS; MINOGIN, VG.  
LASER-RADIATION PRESSURE ON FREE ATOMS  
PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS 73(1), 1-65 (1981)
99. MINOGIN, VG.  
KINETIC-THEORY OF ATOMIC SCATTERING BY A RESONANT STANDING LIGHT-WAVE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 80(6), 2231-2242 (1981)
100. ZUEVA, TV; LETOKHOV, VS; MINOGIN, VG.  
THEORY OF ATOMIC-BEAM DECELERATION BY RESONANCE LASER-RADIATION  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 81(1), 84-95 (1981)

101. BALYKIN, VI; LETOKHOV, VS; MINOGIN, VG.  
RADIATIVE REDISTRIBUTION OF THE VELOCITIES OF FREE SODIUM ATOMS BY RESONANCE LASER-RADIATION  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 80(5), 1779-1788 (1981)
102. BALYKIN, VI; MINOGIN, VG.  
MODERATION OF ATOMS AND REDISTRIBUTION OF ATOMIC VELOCITIES UNDER THE PRESSURE OF RESONANCE LASER-RADIATION  
IZVESTIYA AKADEMII NAUK SSSR SERIYA FIZICHESKAYA 45(6), 1047-1058 (1981)
103. LETOKHOV, V.S.; MINOGIN, V.G.; MCKELLAR, A.R.W.; OKA, T.; STOICHEFF, B.P..  
ATOMIC DECELERATION, MONOCHROMATIZATION AND TRAPPING IN LASER WAVES: THEORY AND EXPERIMENTS  
CONFERENCE: LASER SPECTROSCOPY V. FIFTH INTERNATIONAL CONFERENCE LOCATION: JASPER, ALTA., CANADA DATE: 29 JUNE-3 JULY 1981 , 377 (1981)
104. ZUEVA, T.V.; MINOGIN, V.G..  
OPTIMUM SLOWING OF ATOMS BY A RESONANT LASER BEAM  
SOVIET TECHNICAL PHYSICS LETTERS 7(8), 411 (1981)
105. LETOKHOV, VS; MINOGIN, VG.  
POSSIBILITY OF ACCUMULATION AND STORAGE OF GOLD ATOMS IN MAGNETIC TRAPS  
OPTICS COMMUNICATIONS 35(2), 199-202 (1980)
106. MINOGIN, VG.  
DECELERATION AND MONOCHROMATIZATION OF ATOMIC-BEAMS BY LASER-RADIATION PRESSURE  
OPTICS COMMUNICATIONS 34(2), 265-268 (1980)
107. MINOGIN, VG.  
KINETIC-EQUATION FOR ATOMS INTERACTING WITH LASER-RADIATION  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 79(6), 2044-2057 (1980)
108. LETOKHOV, VS; MINOGIN, VG.  
COOLING, TRAPPING, AND STORAGE OF ATOMS BY RESONANT LASER FIELDS  
JOURNAL OF THE OPTICAL SOCIETY OF AMERICA 69(3), 413 (1979)
109. MINOGIN, VG; SERIMAA, OT.  
RESONANT LIGHT PRESSURE FORCES IN A STRONG STANDING LASER WAVE  
OPTICS COMMUNICATIONS 30(3), 373 (1979)
110. LETOKHOV, VS; MINOGIN, VG.  
TRAPPING AND STORAGE OF ATOMS IN A LASER FIELD  
APPLIED PHYSICS 17(1), 99 (1978)
111. LETOKHOV, VS; LOBASHEV, VM; MINOGIN, VG; MISHIN, VI.  
METHOD OF OBTAINING POLARIZED PROTONS BY LASER-RADIATION  
JETP LETTERS 27(5), 284 (1978)
112. LETOKHOV, VS; MINOGIN, VG.  
LASER MONOCHROMATOR OF A RELATIVISTIC PROTON-BEAM WITH RESOLUTION AND ACCURACY UP TO 2X105  
PHYSICAL REVIEW LETTERS 41(12), 775 (1978)
113. LETOKHOV, VS; MINOGIN, VG.  
QUANTUM MOTION OF ATOMS IN RESONANT FIELD OF A STANDING LIGHT-WAVE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 74(4), 1318 (1978)
114. STENHOLM, S; MINOGIN, VG; LETOKHOV, VS.  
RESONANT LIGHT PRESSURE DUE TO A STRONG STANDING WAVE  
OPTICS COMMUNICATIONS 25(1), 107 (1978)
115. LETOKHOV, VS; MINOGIN, VG.  
QUANTUM MOTIONS OF ULTRACOOLED ATOMS IN RESONANT LASER FIELD  
PHYSICS LETTERS A 61(6), 370 (1977)
116. LETOKHOV, VS; MINOGIN, VG; PAVLIK, BD.  
COOLING AND TRAPPING OF ATOMS AND MOLECULES BY A RESONANT LASER FIELD  
OPTICS COMMUNICATIONS 19(1), 72 (1976)

117. LETOKHOV, VS; MINOGIN, VG.  
NONLINEAR NARROW DOPPLER-FREE RESONANCES FOR OPTICAL-TRANSITIONS AND  
ANNIHILATION RADIATION FROM POSITRONIUM ATOM  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 71(7), 135 (1976)
118. LETOKHOV, VS; MINOGIN, VG.  
SPECTRUM OF NUCLEAR GAMMA-TRANSITIONS IN A SYMMETRIC POLYATOMIC MOLECULE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 70(3), 794 (1976)
119. MINOGIN, VG.  
SHAPE OF 2-PHOTON ABSORPTION RESONANCE LINE TAKING INTO ACCOUNT QUADRATIC  
DOPPLER EFFECT  
KVANTOVAYA ELEKTRONIKA 3(9), 2061-2063 (1976)
120. KOMPANETS, ON; LETOKHOV, VS; MINOGIN, VG.  
STUDIES ON EXCITATION OF VIBRATIONAL LEVELS OF OSMIUM TETROXIDE MOLECULE BY  
CONTINUOUS CO<sub>2</sub>-LASER EMISSION  
KVANTOVAYA ELEKTRONIKA 2(2), 370 (1975)
121. KOMPANETS, ON; KUKUDZHANOV, AR; LETOKHOV, VS; MINOGIN, VG; MIKHAILOV, EL.  
NONLINEAR LASER SPECTROSCOPY OF VIBRATIONAL-ROTATIONAL TRANSITIONS IN MONO-  
ISOTOPIC OSO<sub>4</sub> AND STABILIZATION OF CO<sub>2</sub>-LASER FREQUENCY  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 69(1), 32 (1975)
122. LETOKHOV, VS; MINOGIN, VG.  
NUCLEAR GAMMA-TRANSITIONS SPECTRUM IN A DIATOMIC MOLECULE  
ZHURNAL EKSPERIMENTALNOI I TEORETICHESKOI FIZIKI 69(5), 1569 (1975)