

Book Chapters and Invited Reviews

- [1] Atomic Coherence Phenomena, A. Belyanin, G.R. Welch, and M.O. Scully, in: Encyclopedia of Modern Optics, edited by Robert D. Guenther, Duncan G. Steel and Leopold Bayvel, Elsevier, Oxford, 2004, ISBN 0-12-227600-0, pp.247-255.
- [2] Book Chapter 6: Raman Injection and Inversionless Intersubband Lasers, Alexey Belyanin, Federico Capasso, Mariano Troccoli, in: Intersubband transitions: physics and devices, Ed. by R. Paiella, McGraw-Hill, 2005.
- [3] Book Chapter 5: Optical Nonlinearities in Intersubband Transitions and Quantum Cascade Lasers, C. Gmachl, O. Malis, and A. Belyanin, in: Intersubband Transitions: Physics and Devices, ed. by R. Paiella, McGraw-Hill, 2005 (in press).
- [4] Atomic and nuclear interference effects for quantum information processing, O. Kocharovskaya, A. Belyanin, I. Mariyenko and Y. Rostovtsev, in: *The Physics of Communication*, Proc. XXII Solvay Conference, ed. by I. Antoniou, V.A. Sadovnichy, and H. Walther, World Scientific, 485-495 (2003).

Refereed publications

- [1] Cooperative emission of quantized electron-hole plasma, Y.D. Jho et al., PRL, submitted.
- [2] Quantum electrodynamics of accelerated atoms in free space and in confined cavities, A. Belyanin, V. Kocharovsky, M.O. Scully, E. Fry, and F. Capasso, quant-ph/0412134, Phys. Rev. A submitted.
- [3] Coherent nonlinear optics with quantum cascade structures, A. Belyanin, D. Liu, Feng Xie, F. Capasso, and M. Troccoli, Journal of Modern Optics, 52, 2293 (2005).
- [4] M. Belkin, M. Troccoli, L. Diehl, F. Capasso, A. Belyanin, D.L. Sivco, A.L. Cho, Quasi-phase matching of intersubband second-harmonic generation by a spatially periodic bias voltage in quantum cascade lasers, Appl. Phys. Lett., submitted.
- [5] A. Gomez-Iglesias, D. Wasserman, C. Gmachl, A. Belyanin, and D.L. Sivco, Stimulated electronic Anti-Stokes Raman emission in Quantum Cascade lasers, Appl. Phys. Lett., 87, 261113 (2005).
- [6] Far-infrared few-cycle-pulse generation in quantum-well heterostructures under femtosecond laser pumping, A. Belyanin, D. Pestov, V. Kocharovsky, Vl. Kocharovsky, and M.O. Scully, Acta Physica Polonica A 107 (1), 151-157 (2005).
- [7] Raman injection laser, Mariano Troccoli, Alexey Belyanin, Federico Capasso, Ertugrul Cubukcu, Deborah L. Sivco, and Alfred Y. Cho, Nature, 433, 845 (2005).
- [8] Milliwatt second-harmonic generation in quantum-cascade lasers with modal phase-matching, Malis, O., Belyanin, A., Sivco, D.L., Chen, J., Sergent, A.M., Gmachl, C., and Cho, A.Y., Electron. Lett. 40, 1586 (2004).

- [9] Reply: Enhancing acceleration radiation from ground-state atoms via cavity quantum electrodynamics, M.O. Scully, V. Kocharovskiy, A. Belyanin, E. Fry, and F. Capasso, *Phys. Rev. Lett.* 93, 129302 (2004).
- [10] Trinesha S. Mosely, Alexey Belyanin, Claire Gmachl, Deborah L. Sivco, Milton L. Peabody, and Alfred Y. Cho "Third harmonic generation in a Quantum Cascade laser with monolithically integrated resonant optical nonlinearity", *Optics Express* 12, pp. 2972 - 2976, 2004.
- [11] D. Pestov, A. Belyanin, V. Kocharovskiy, Vl. Kocharovskiy, and M.O. Scully, "Mid/far-infrared few-cycle-pulse emission via resonant mixing in semiconductor heterostructures", *Journal of Modern Optics*, 51, 2523-2531, 2004.
- [12] Improvement of second-harmonic generation in quantum cascade lasers with true phase-matching, O. Malis, A. Belyanin, C. Gmachl, D. L. Sivco, M. L. Peabody, A. M. Sergent, A. Y. Cho, *Appl. Phys. Lett.*, 84, 2721 (2004).
- [13] Temperature dependence and single-mode tuning behavior of Second Harmonic Generation in Quantum Cascade Lasers, C. Gmachl, N. Owschimikow, A. Belyanin, A. M. Sergent, D. L. Sivco, M. L. Peabody, F. Capasso, A. Y. Cho, *Appl. Phys. Letters*, 84, 2751 (2004).
- [14] D. G. Esaev, M. B. M. Rinzan, S. G. Matsik, A. G. U. Perera, H. C. Liu, B. N. Zvonkov, V. I. Gavrilenko, and A. A. Belyanin, "High performance single emitter homojunction interfacial workfunction far infrared detectors", *Journal of Applied Physics*, vol.95, 512-519 (2004).
- [15] A.A. Belyanin, V.V. Kocharovskiy, Vl.V. Kocharovskiy, V.A. Kukushkin, Photon absorption in a magnetized vacuum and formation of cyclotron-annihilation lines in γ -emission of neutron stars, *Advances in Space Research*, 33 (4), 620-624, 2004.
- [16] Laser transistors for multi-frequency generation in the infrared range, A.A. Belyanin, V.V. Kocharovskiy, Vl.V. Kocharovskiy, D.S. Pestov, *Izvestiya RAN Physics*, 67, 262 (2003).
- [17] Enhancing acceleration radiation from ground-state atoms via cavity quantum electrodynamics, Marlan Scully, Vitaly Kocharovskiy, Alexey Belyanin, Edward Fry, and Federico Capasso, *Phys. Rev. Lett.* 91, 243004 (2003).
- [18] New semiconductor laser designs and the exploratory investigation of the terahertz frequency range, A.A. Belyanin, D. Deppe, V.V. Kocharovskiy, Vl.V. Kocharovskiy, D.S. Pestov, and M.O. Scully, *Physics-Uspekhi* 46, 986-992 (2003); In Russian: 173, n. 9, 21-27, 2003.
- [19] Optimized Second Harmonic Generation in Quantum Cascade Lasers, Claire Gmachl, Alexey Belyanin, Deborah L. Sivco, Milton L. Peabody, Nina Owschimikow, A. Michael Sergent, Federico Capasso, Alfred Y. Cho, *IEEE Journal of Quantum Electronics*, 39, No. 11, 1345-1355 (2003).

- [20] Resonant second-order nonlinear optical processes in quantum cascade lasers, N. Owschimikow, C. Gmachl, A. Belyanin, V. Kocharovskiy, D.L. Sivco, R. Colombelli, F. Capasso, and A.Y. Cho, *Phys. Rev. Lett.* 90(4), 043902, 31 January 2003.
- [21] Novel schemes and prospects of superradiant lasing in heterostructures, Belyanin A.A., Kocharovskiy V.V., Kocharovskiy V.I., Pestov D.S., *Laser Physics* 13, No.2, 161-167 (2003).
- [22] Atomic and nuclear interference effects for quantum information processing, O. Kocharovskaya, A. Belyanin, and Y. Rostovtsev, *Quantum Computers and Computing*, accepted for publication (2002).
- [23] Constraints on the extremely high energy cosmic ray accelerators from classical electrodynamics, Aharonyan F.A., Belyanin A.A., Derishev E.V., Kocharovskiy V.V., Kocharovskiy V.I., *Phys. Rev. D* 2002, 66, 023005.
- [24] Three-terminal semiconductor laser for wave mixing, Belyanin A.A., Kocharovskiy V.V., Kocharovskiy V.I., Scully M.O. *Phys. Rev. A*, 2002, 65, 053824.
- [25] Coherent radiation from neutral molecules moving above the grating. Belyanin A.A., Capasso F., Kocharovskiy V.V., Kocharovskiy V.I., *Phys. Rev. Lett.*, 2002, 88, 053602.
- [26] Formation and dynamics of self-sustained neutron haloes in disk accreting sources. Belyanin A.A., Derishev E.V. *Astronomy and Astrophysics*, 2001, 379, L25-L29.
- [27] Formation and dynamics of neutron haloes in disk accreting black holes. Belyanin A.A., Derishev E.V. *Astrophysics and Space Science*, 2001, 276, 241-242.
- [28] Inversionless lasing with self-generated driving field. Belyanin A.A., Bentley C., Capasso F., Kocharovskaya O., Scully M.O. *Phys. Rev. A*, 2001, 64, 013814.
- [29] Infrared generation in low-dimensional semiconductor heterostructures via quantum coherence. Belyanin A.A., Capasso F., Kocharovskiy V.V., Kocharovskiy V.I., Scully M.O. *Phys. Rev. A*, 2001, 63, 053803.
- [30] Belyanin A.A., Kocharovskiy V.V., Kocharovskiy V.I., Pestov D.S. One- and two-colour superradiant lasing in magnetized quantum-well heterostructures, *Nanotechnology*, 2001, 12, 581-584.
- [31] Resonant parametric generation of infrared radiation on intersubband transitions in low-dimensional semiconductor heterostructures. Belyanin A.A., Capasso F., Kocharovskiy V.V., Kocharovskiy V.I., Pestov D.S., Scully M.O. *Nanotechnology*, 2001, 12, 450-452.
- [32] The effect of free neutrons on the dynamics and radiation of astrophysical plasmas. Belyanin A.A., Derishev E.V., Kocharovskiy V.V., Kocharovskiy V.I. *Izv. VUZov. Radiofiz.*, 2001, 44, No.1,2, 13-26 (Engl. translation: *Radiophysics and Quantum Electronics*, 44, 10-21).

- [33] Superradiance under continuous pumping in a heterolaser with cyclotron quantum dots. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I., Pestov D.S. *Izv. VUZov. Radiofiz.*, 2001, 44, No.1,2, 54-66 (Engl. translation: *Radiophysics and Quantum Electronics*, 44, No.1,2, 43-53).
- [34] Annihilation-cyclotron features of magnetized vacuum in the MeV emission from neutron stars. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *Izv. VUZov. Radiofiz.*, 2001, 44, No.1,2, 72-80 (Engl. translation: *Radiophysics and Quantum Electronics*, 2001, 44, 59-65).
- [35] Prospects for detection of primordial black holes captured in cold dark matter haloes around massive objects. Derishev E.V., Belyanin A.A. *Astronomy and Astrophys.* 1999, 343, 1-9.
- [36] Optically thick super-Eddington winds in Galactic superluminal sources. Belyanin A.A. *Astronomy and Astrophys.* 1999, 344, 199-204.
- [37] Formation of jets in Galactic superluminal sources. Belyanin A.A. *Astrophys. Lett. and Commun.* 1999, 38, 245-248.
- [38] Soft gamma-ray emission from plasma winds around evaporating primordial black holes. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *Astrophys. Lett. and Commun.* 1999, 38, 281-284.
- [39] Superradiant generation of femtosecond pulses in quantum-well heterostructures. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *JEOS Part B (Quantum & Semiclass. Optics)*, 1998, 10, L13-L19.
- [40] Gamma-ray bursts from the final stage of primordial black hole evaporations. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *Advances in Space Research*, 1998, 22, 1111-1114.
- [41] Inhibited spontaneous emission and electromagnetic instability of an atom in the near zone from the surface of an active medium. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *Computers Math. Applic.* 1997, 34, 795-805.
- [42] Cooperative coherent phenomena in annihilating electron-positron and electron-hole plasmas in a strong magnetic field. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *Computers Math. Applic.* 1997, 34, 845-880.
- [43] Generation of gamma-ray bursts as a result of primordial black hole evaporation. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *Izv. VUZ. Radiofiz.* 1998, 41, No. 1, 36-45 (Engl. Translation: *Radiophysics and Quantum Electronics*, 1998, 41, 9-25).
- [44] Pair production near accreting black holes. Belyanin A.A., Van Oss R.F. *Advances in Space Research*, 1997, 19, No.1, 113-116.
- [45] Collective QED processes of electron-hole recombination and electron-positron annihilation in a strong magnetic field. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. *JEOS Part B (Quantum and Semiclassical Optics)*, 1997, 9, 1-44.

- [46] Atomic dynamics near the surface of an active medium: electromagnetic instability and suppression of spontaneous emission. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Journ. of Techn. Phys., 1997, 38, No. 2, 181-184.
- [47] Reversal of radiation reaction force and instability of the ground state of an atom located above the surface of an active medium. Kocharovsky V.V., Kocharovsky V.I., Belyanin A.A. Phys. Rev. Lett., 1996, 76, 3285-3288.
- [48] Explosive amplification of electromagnetic field in a magnetized flow of accelerated electron oscillators. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Phys. Rev. E, 1996, 53, 5338-5349.
- [49] Gamma-ray bursts from the final stage of primordial black hole evaporations. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Mon. Notices of the Royal Astron. Society, 1996, 283, 626-634.
- [50] Modified spontaneous transitions and electromagnetic instability of the ground state of a molecule due to near field in the vicinity of an active medium. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Laser Physics, 1995, 5, No. 5/6, 1164-1170.
- [51] Mode superradiance of free electron-hole pairs in semiconductor magneto-optics. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I., Mironov Yu.M. Laser Physics, 1995, v.5, N 5/6, 1121-1132.
- [52] Annihilation lines from accreting black holes. Belyanin A.A., Van Oss R.F. Astron. and Astrophys., 1995, 302, 154-164.
- [53] VLA data constraints on the Galactic Centre annihilation line source 1E1740.7-2942. Belyanin A.A., Zheleznyakov V.V. Astron. and Astrophysics, 1994, 287, 782-788.
- [54] Recombination superradiance in semiconductors. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Laser Physics, 1992, 2, No.6, 952-964.
- [55] Superradiance phenomenon in semiconductor magneto-optics. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Solid State Commun., 1991, 80, No.3, 243-246.
- [56] Collective annihilation of electron-positron plasma in a strong magnetic field. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Zh. Exp. Theor. Phys., 1991, 99, 127-143 (Engl. translation: JETP, 1991, 72, 70-79).
- [57] Collective electron-positron annihilation. Belyanin A.A., Kocharovsky V.V., Kocharovsky V.I. Phys.Lett.A, 1990, 149, No.5/6, 258-264.

Chapters: Interactive Stories is an app with dozens of interactive stories for players to choose from, ranging from horror, to romance, to fantasy and more! You get to make the choices! Here is a list of all current stories that have been released in the game. Books under this category are written by Chapters Originals team, they usually only have one chapter. Roman Steele - Fashion Designer. Logan West - Survivalist. Soren Lutzer - Influencer. Ethan Chasse - Occultist. Many books of contributed chapters have no payment at all for the contributing authors. If they are academics, "publish or perish" is usually enough to win their participation in a prestigious pu... There are also editors who are invited by a publisher to organize a book or they pitch a book to a publisher. If the book is signed, the editor locates and chooses the contributing authors, and the publisher pays them directly. Many books of contributed chapters have no payment at all for the contributing authors. Are you being asked to contribute chapters to a book? Or review a book? If you're being asked to contribute chapters to a book, and the editor of that book is contracted to a publisher, then the publisher will (should) pay you for your efforts.