CURRICULUM VITAE

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EDUCATION

2006-2008	Junior research assistant of the Department of Physical Foundation of Electronic Engineering, Kharkiv National University of Radio Electronics (KhNURE), Kharkiv, Ukraine.
2003-2006	Ph. D. student in the KhNURE, Kharkiv, Ukraine. Speciality: “Radiophysics”.
2003	Electronics Engineer in the area of lasers and optoelectronic techniques. Diploma of electronics engineer with awards.
2002-2003	Student at the Electronics Faculty in the KhNURE, Kharkiv, Ukraine. Speciality: “Lasers and optoelectronic techniques”. GPA = 5.
2002	Bachelor of Science in the area of lasers and optoelectronic techniques.
1998-2002	Student at the Electronics Faculty in the KhNURE, Kharkiv, Ukraine. Speciality: “Lasers and optoelectronic techniques”. GPA = 4.62.
1995-1998	Study in the economical lyceum №161 in Physical and Mathematical class, Kharkiv, Ukraine
1988-1995	Study in the school №85, Kharkiv, Ukraine

Languages: Russian, Ukrainian, English.

Ph. D. THESIS

Title: "Electrodynamic characteristics of photon component based on periodic structure".

Professional activity:

- Electro-opto-thermal model of the intracavity-contacted oxide-confined (ICOC) vertical-cavity surface-emitting lasers (VCSEL);
- Computer modeling of the microcavity based on macroporous silicon infiltrated with liquid crystals;
- Computer modeling of the distribution of the local director of nematic liquid crystal (NLC) which is confined inside cylindrical macropores of the porous silicon;
- Theoretical study of the quantum efficiency of resonant cavity enhanced photodetectors (RCE PD);
- Modeling and optimization of RCE PD mirrors and ICOC VCSEL mirrors;
- Optical models of photonic crystal and optoelectronic devices;
- Liquid crystals optical components;
- Tunable microcavities.

ELECTRONICS ENGINEER THESIS

Title: "Distribution of electromagnetic field in Vertical Cavity Surface Emitting Lasers".

Professional activity:

- Modeling of electromagnetic fields in vertical cavity surface emitting lasers;
- Computer realization of mathematical models for photonic crystal;
- Mathematical methods for optoelectronics;
- Research of electrodynamic properties components of optical fiber communication line.

COMPUTER SKILLS

Programming language:	C++; Java; Delphi; Pascal 7.0; Fortran;
Database:	Microsoft SQL Server, Oracle, MySQL, Foxpro
Research software:	MATLAB; Mathcad; RSoft; FemLab; CAMFR.
Other:	Microsoft Office: Word, Excel, PowerPoint; CorelDRAW; PhotoShop; OriginPro; Web-design (HTML).

GRANTS

Grant for take part in 56th Scottish Universities Summer School in Physics "Ultrafast Photonics" (School of Physics and Astronomy, University of St. Andrews, Scotland, 1st - 14th September 2002)
Grant for take part in NKT Advanced Photonics Summer School (Fuglsoe, Denmark, October 14 - 18, 2004)

AWARDS

Best diploma work of Electronics Engineer.
Winner of the university competitions in field of **Mathematics** in 1998.
Winner of the competitions in field of **Mathematics** on school and district levels in 1995 - 1998.

MEMBERSHIP

IEEE Student member. The Institute of Electrical and Electronic Engineers (http://www.ieee.org).
LEOS Student member. Laser and Electro-Optical Society (http://www.ieee.org/portal/site/leos).
SPIE Student member. The International Society for Optical Engineering (http://spie.org).

Member of the Organizing Committee for IEEE-LEOS International Conference on Laser and Fiber Optical Networks Modeling, **LFNM** (http://lfnm.kture.kharkov.ua).
Member of the Organizing Committee for IEEE-LEOS International Conference on Advanced Optoelectronics and Lasers, **CAOL** (http://caol.kture.kharkov.ua).

LIST OF JOURNAL PUBLICATIONS

1. Lysak V. V., Kovbasa A. A., Sukhoivanov I. A., Kublik A. V., “Calculation of electromagnetic field in VCSEL’s using a weighted index method,” *Vestnik Karazin KhNU*, No 570, pp. 240 - 243, 2002 (in Russian)
2. Kovbasa A. A., Zinkovska I. O., Lysak V. V., Shulika A. V., Sukhoivanov I. A., “Reflectivity of oxide window distributed Bregg reflectors,” *Radioelektronika i informatika*, №3(32), pp. 55 - 61, 2005 (in Russian)
3. Gryshchenko S. V., Dyomin A. A., Lysak V. V., Petrov S. I., “The quantum efficiency of InGaAs/GaAs resonant cavity enhanced photodetector for the ultrashort optical connections,” *Proceedings of Usikov IRE NASU "Radiophysics and Electronics"*, Vol. 12, № 2, pp. 401-407, 2007 (in Russian)
4. Dyomin A. A., Lysak V. V., Zinkovska I. O., “Reflection spectrum of the top mirror in ICOC VCSELs taking into account the uniform temperature distribution,” *Proceedings of SPIE*, Vol. 7009, pp. 700909-700909-6, 2008
5. Dyomin A. A., Lysak V. V., Petrov S. I., Lee Y. T., Sukhoivanov I. A., “Temperature behaviour of top mirror reflection spectrum in intra-cavity-contacted oxide-confined vertical-cavity surface-emitting lasers,” *Optics and Lasers in Engineering*, Volume 46, Issue 3, pp. 211-216, March 2008
6. Tkachenko V., Dyomin A. A., Tkachenko G. V., Abbate G., Sukhoivanov I. A., “Electrical reorientation of liquid crystal molecules inside cylindrical pores for photonic device applications,” *Journal of Optics A: Pure and Applied Optics*, Volume 10, Issue 5, pp. 055301-6, May 2008

7. Gryshchenko S. V., Dyomin A. A., Lysak V. V., Petrov S. I., "Quantum Efficiency of the InGaAS/GaAs Resonant Photodetector for the Ultrashort Optical Connections", *Telecommunications and Radio Engineering*, Volume 67, Issue 19, pp. 1749-1762, 2008

PARTICIPATION IN CONFERENCES

1. Lysak V. V., Kovbasa A. A., "Electromagnetic waves in VCSEL: vector weighted index method," *Proceeding of the 6th International youth Forum "Radio electronics and youth in the XXI century,"* Kharkiv, Ukraine, 2002 (in Russian).
2. Lysak V. V., Kovbasa A. A., Sukhoivanov I. A., Kublik A. V., "Calculation of electromagnetic field in VCSEL's using a weighted index method," *Jubilee scientific conference dedicated to the 50th Radio Engineering Faculty of the V. N. Karazin KhNU*, Kharkiv, Ukraine, 2002, Oral presentation (in Russian).
3. Kovbasa A. A., "Choice of boundary condition to calculation of electromagnetic field in VCSEL's," *Proceeding of the 7th International youth Forum "Radio electronics and youth in the XXI century,"* Kharkiv, Ukraine, 2003, p. 174 (in Russian).
4. Kovbasa A. A., Shulika A. V., Lysak V. V., "Application of the full–vector weighted–index method for optical analysis of VCSEL microcavity," *Proceeding of the 5th International Workshop on Laser and Fiber-Optical Networks Modeling, LFNM'03*, 19-20 September, 2003, Alushta, Crimea, Ukraine, pp. 249-251.
5. Gryshchenko S. V., Dyomin A. A., "Soft based product BraggMod 2.0 for the studying propagation and reflection characteristics in the 1-D photon crystals with complicated configuration," *8th International youth Forum "Radio electronics and youth in the XXI century,"* Kharkiv, Ukraine, 2004, Poster presentation (in Russian).
6. Kovbasa A. A., Lysak V. V., Shulika A. V., "Analysis of reflection properties of bragg mirror with oxide window," *Proceeding of the 6th International Conference on Laser and Fiber-Optical Networks Modeling, LFNM'2004*, 6-9 September, 2004, Kharkov, Ukraine, p. 133.
7. Dyomin A. A., Lysak V. V., Zinkovska I. O., "Influence of nonuniform temperature distribution on reflection spectrum of top mirror in intracavity-contacted oxide-confined VCSELs," *Proceeding of the 7th International Conference on Laser and Fiber-Optical Networks Modeling, LFNM'05*, 15-17 September, 2005, Yalta, Crimea, Ukraine, pp. 143-146.
8. Zinkovska I. O., Dyomin A. A., Tkachenko E. V., Alvarado-Mendez E., Tkachenko V. M., Ibarro-Manzano O., Andrade-Lucio J. A., Sukhoivanov I. A., "Electrical modulation of bragg reflectors based on porous silicon infiltrated with liquid crystals," *Proceeding of the 7th International Conference on Laser and Fiber-Optical Networks Modeling, LFNM'05*, 15-17 September, 2005, Yalta, Crimea, Ukraine, pp. 152-155.
9. Safonov I. M., Sukhoivanov I. A., Shulika O. V., Dyomin A. A., Yakushev S. O., Klymenko M. V., Petrov S. I., Lysak V. V., "Continuous Band Heterostructures: A New Concept for Development of Low-loss Distributed Bragg Reflectors for Optoelectronic Devices," *Proceeding of the 8th International Conference on Transparent Optical Networks, ICTON'2006*, paper We.C2.2, vol.2, pp. 193-198.
10. Dyomin A. A., Fesenko V. I., Dyomina I. O., Tkachenko G. V., Sukhoivanov I. A., Tkachenko V. M., "Polarization dependence of optical characteristics of the microcavity based on macroporous silicon infiltrated with liquid crystals," *Proceeding of the 8th International Conference on Laser and Fiber-Optical Networks Modeling, LFNM'06*, 29 June - 1 July, 2006, Kharkiv, Ukraine, pp. 493-496.
11. Dyomina I. O., Dyomin A. A., Sukhoivanov I. A., Tkachenko V. M., "Polarization-independent microcavity with two phase layers," *Proceeding of the 8th International Conference on Laser and Fiber-Optical Networks Modeling, LFNM'06*, 29 June - 1 July, 2006, Kharkiv, Ukraine, pp. 497-498.

12. Gryshchenko S. V., Dyomin A. A., Lysak V. V., Sukhoivanov I. A., "Quantum efficiency of the GaAs/InGaAs resonant cavity enhanced photodetector for the ultrashort optical connection," *Proceeding of the 7th International Young Scientists Conference "Optics and High Technology Material Science SPO 2006"*, 26-29 October, 2006, Kyiv, Ukraine, p. 125
13. Gryshchenko S. V., Dyomin A. A., Lysak V. V., Sukhoivanov I. A., "Influence of mirrors reflectivity properties on the quantum efficiency of InGaAs/GaAs resonant cavity enhanced photodetector," *6th Belarusian-Russian Workshop on Semiconductor Lasers and Systems*, 4-8 June 2007, Minsk, Belarus, Oral presentation
14. Gryshchenko S. V., Dyomin A. A., Lysak V. V., "Theoretical study of the quantum efficiency of InGaAs/GaAs resonant cavity enhanced photodetectors," *Proceeding of the International Workshop on Optoelectronic Physics and Technology, OPT'07*, 20-22 June, 2007, Kharkiv, Ukraine, pp. 20-22
15. Dyomin A. A., Tkachenko G. V., Tkachenko V., Sukhoivanov I. A., Abbate G., "Macroporous Silicon Infiltrated with Liquid Crystals: Director-Field Configuration and Device Applications," *Proceeding of the International Workshop on Optoelectronic Physics and Technology, OPT'07*, 20-22 June, 2007, Kharkiv, Ukraine, pp. 46-49
16. Dyomin A. A., Tkachenko G. V., Tkachenko V., Sukhoivanov I. A., "Electrical reorientation of liquid crystal within silicon macropore for photonic devices," *Proceeding of the 9th International Conference on Transparent Optical Networks, ICTON'07*, 1-5 July, 2007, Rome, Italy
17. Abbate G., Dyomin A. A., Tkachenko G. V., Tkachenko V., De Stefano L., Sukhoivanov I. A., "Electrical reorientation of nematic within cylindrical pores for applications in photonics," *12th International Topical Meeting on Optics of Liquid Crystals, OLC'07*, 1-5 October, 2007, Puebla, Mexico, Oral presentation
18. Gryshchenko S. V., Dyomin A. A., "Influence of image forces on the electron motion in heterostructure InGaAs/GaAs," *Proceeding of the 11th International youth Forum "Radio electronics and youth in the XXI century,"* 10-12 April, 2007, Kharkiv, Ukraine, p. 239 (in Russian)
19. Lysak V. V., Dyomin A. A., Lee Y. T., Petrov S. I., Sukhoivanov I. A., "Temperature lens effect in top mirror of intra-cavity-contacted oxide-confined VCSELs," *Photonics Conference 2007*, 14-16 November, 2007, Korea, TP-40, pp. 165 - 166
20. Gryshchenko S. V., Dyomin A. A., Lysak V. V., "Calculation the quantum efficiency spectrum of resonant cavity enhanced photodetector with top mirror defect," *VII Kharkiv Young Scientist Conference on "Radiophysics and Electronics", YSC'07*, IRE NASU, December 12-14, 2007, Kharkiv, Ukraine, p. 93/14
21. Tkachenko G. V., Dyomin A. A., Tkachenko V. M., Sukhoivanov I. A., "Thermooptical filter based of a free-standing porous silicon film infiltrated with liquid crystal," *VII Kharkiv Young Scientist Conference on "Radiophysics and Electronics", YSC'07*, IRE NASU, December 12-14, 2007, Kharkiv, Ukraine, p. 100/145

PRESENTATIONS IN SUMMER SCHOOLS

1. Kovbasa A. A., Lysak V. V., "Calculation of the electromagnetic field in PC using transfer matrix method", *56th Scottish Universities Summer School in Physics "Ultrafast Photonics"*, 1-14 September, 2002, School of Physics and Astronomy, University of St. Andrews, Scotland, Poster presentation
2. Kovbasa A. A., Lysak V. V., Shulika A. V., "Analysis of reflection properties of Bragg mirror with oxide window", *NKT Advanced Photonics Summer School*, 14-18 October, 2004, Fuglsoe, Denmark, Poster presentation

PERSONAL

Full name: Dyomin Oleksandr Oleksandrovych
Date of birth: 10 July 1981
Father's full name: Kovbasa Oleksandr Fedorovych
Mother's full name: Dyomina Natalja Mykolayivna
Current Nationality: Ukrainer
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Home telephone number: (+38057) 340-49-72
Family status: married
Full name of spouse: Dyomina Irina Olegivna