

CURRICULUM VITAE

Sergii O. Yakushev

PhD. Student

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EDUCATION

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| Since 2005 | PhD Student at the Department of Physical Foundations of Electronic Engineering in the Kharkov National University of Radio Electronics, Kharkov, Ukraine. |
| 2003-2004 | Student at the Electronics Faculty in the Kharkov National University of Radio Electronics, Kharkov, Ukraine. Graduated with the highest honors from the Kharkov National University of Radio Electronics as a specialist in the area of lasers and optoelectronic engineering. |
| 1999-2003 | Student at the Electronics Faculty in the Kharkov National University of Radio Electronics, Kharkov, Ukraine. Graduated with the highest honors from the Kharkov National University of Radio Electronics as a bachelor in the area of lasers and optoelectronic engineering. |

MASTER OF SCIENCES THESIS

Title: "Development of multilayer dielectric mirrors for oscillator of laser range finder at the 1.54 microns wavelength."

- Calculation of multilayer dielectric mirrors
- Compression of laser pulses

PROFESSIONAL ACTIVITY:

- chirped mirrors designing and optimization,
- investigation of physical processes in ultrafast lasers, methods of dispersion compensation
- optics of ultrafast laser pulses, pulse compression

MEMBERSHIP

IEEE - The Institute of Electrical and Electronic Engineers (USA)

PUBLICATIONS

Complete publication list includes 16 scientific works, among them:

- 3 journal papers in Russian;
- 2 journal papers in English;

AWARDS

- 1) OSA Travel Grant intended for participating in Frontiers in Optics 2007 and Laser Science XXIII collocated with Organic Materials and Devices for Displays and Energy Conversion, September 16-20, 2007, San Jose, California, USA.
- 2) OSA Travel Grant intended for participating in Integrated Photonics and Nanophotonics Research and Applications (IPNRA2008), July 13-16, 2008, Boston, MA, USA.

LANGUAGES

Russian, Ukrainian, English,

PERSONAL

Date of birth: 11 December 1982, not married, good health.

LIST OF PUBLICATIONS

Journal Publications

1. Investigation of negative dispersion in chirping mirrors of arbitrary order /V. V. Lysak, I. A. Sukhoivanov, S. O. Yakushev, A. V. Shulika // Radioelektronika i informatika (Radio electronics and informatics). №3(28) 2004, pp. 54-59. (in Russian)
2. The recursive formula for transfer matrix of chirping mirror / I. A. Sukhoivanov, A. V. Shulika, S. O. Yakushev // Radioelektronika i informatika (Radio electronics and informatics). №4(33) 2005, pp. 25-30. (in Russian)
3. Modeling and simulation of interaction of the ultrashort laser pulse with chirped mirror for structure design improvement, S. O. Yakushev, I. A. Sukhoivanov, O. V. Shulika, V. V. Lysak, S. I. Petrov, Journal of Optoelectronics and Advanced Materials, Vol. 9, No. 8, August 2007, p. 2384 – 2390
4. Chirp compression with single chirped mirrors and its assembly, S.O. Yakushev, O.V. Shulika, S.I. Petrov, I.A. Sukhoivanov, Microelectronics Journal, Vol. 39, pp. 690–695, 2008.
5. Modeling of ultrashort laser pulses interaction with chirped mirror / S. O. Yakushev, S. I. Petrov, A. V. Shulika, // Radio technique. №153 2008, pp. 82-89. (in Russian)

Conference Proceedings

6. Investigation of negative dispersion extrema in chirping mirrors of arbitrary order of chirping. V. V. Lysak, I. A. Sukhoivanov, S. O. Yakushev. International Workshop on Laser and Fiber-Optical Networks Modeling, September 19-20, 2003, Alushta, Crimea, Ukraine, pp. 242.
7. Continuous Band Heterostructures: A New Concept for Development of Low-Loss Distributed Bragg Reflectors for Optoelectronic Devices. I.M. Safonov, I.A. Sukhoivanov, O.V. Shulika, A.A. Dyomin, S.O. Yakushev, M.V. Klymenko, S.I. Petrov, V.V. Lysak. International Conference on Transparent Optical Networks, Nottingham, United Kingdom, June 18-22, 2006, pp. 193-198.
8. Simulation of interaction of the femtosecond laser pulse with chirped mirror S. O. Yakushev, I. A. Sukhoivanov, O.V. Shulika, V.V. Lysak, S. I. Petrov International Conference on Numerical Simulation of Optoelectronic Devices, NUSOD 2006, Nanyang Technological University, Singapore, 11 - 14 September 2006, Paper WB5.
9. Improvement of chirped mirror design for femtosecond pulse compression S. O. Yakushev, O.V. Shulika, V.V. Lysak, S. I. Petrov I. A. Sukhoivanov Frontiers in Optics, Laser Science, Optical

- Fabrication and Testing and Organic Photonics and Electronics 2006 (Optical Society of America, Washington, DC, 2006), October 8-12, 2006, Rochester, NY, USA, presentation JWD38.
10. Dispersion Compensation with Chirped Mirrors for Compression of Ultrashort Laser Pulses, Igor A. Sukhoivanov, Sergey O. Yakushev, Oleksiy V. Shulika, Volodymir V. Lysak, International Conference on Transparent Optical Networks, July 1-5, 2007 - Rome, Italy, pp. 128-131.
 11. Modeling, Analysis and Optimization of Chirped Mirrors, S.O. Yakushev, O.V. Shulika, I.A. Sukhoivanov, V.V. Lysak, The International workshop on Optoelectronic Physics and Technology, June 20-22, 2007 Kharkiv, Ukraine, pp. 14-16.
 12. Chirp Compression in Assembly of Chirped 1D Photonic Crystals, Bondarenko M. F., Yakushev S. O., Shulika O. V., The Sixth international Conference on Low Dimensional Structures and Devices (LDSD 2007), April 15-20, 2007, The Archipelago of San Andrés, Colombia, Paper Tu-P68.
 13. Improving Design of Chirped Mirrors via Pulse Waveform Analysis, I. A. Sukhoivanov, O. V. Shulika, S. O. Yakushev, S. I. Petrov, V. V. Lysak, A. V. Kublyk, Integrated Photonics and Nanophotonics Research and Applications (IPNRA2007), Salt Lake City, Utah, USA, July 8-11, 2007, Paper ITuB6.
 14. Comparison of Titanium Dioxide and Silicon Nitride Chirped Mirrors for Femtosecond Pulse Compression, O. V. Shulika, I. A. Sukhoivanov, A. V. Kublyk, S. O. Yakushev, Frontiers in Optics 2007 and Laser Science XXIII collocated with Organic Materials and Devices for Displays and Energy Conversion, September 16-20, 2007, San Jose, California, USA, Paper FTuL4.
 15. Silicon nitride – air chirped mirror for ultrashort pulse compression, S.O. Yakushev, O.V. Shulika, S.I. Petrov, Kharkiv Young Scientist Conference on Radiophysics and Electronics (YSC), IRE NASU, Dec. 12-14, 2007, pp. 103/145.
 16. Chirped Multilayer Mirror Based on Silicon Nitride (Si_3N_4) With Air-Gap Interlayers, I. A. Sukhoivanov, O.V. Shulika, S. O. Yakushev, S. I. Petrov, V.V. Lysak, Integrated Photonics and Nanophotonics Research and Applications (IPNRA2008), July 13-16, 2008, Boston, MA, USA. Paper JMB35.