CURRICULUM VITAE

Personality:

Family name:	**Andreev**
Given name:	**Yury**
Patronymic:	**Mikhailovich**
Sex:	**Male**
Marital status:	**Marital, two kids**
Position:	**Chief Scientists IMCES SB RAS, Leading Scientists SPhTI at TSU**
Date and Place of Birth:	**October 15, 1946, Tomsk town, Russia**
Nationality:	**Russian**
Citizenship	**Russia**

Background of education:

1. Tomsk State University, Radiophysics Department, Quantum Electronics Faculty, Russia, Master on Physics and Radio-electronics, graduated from 1972
2. Institute of Atmospheric Optics SB RAS, PhD (Kandidat Nauk Diploma on Physics and Mathematics), Dissertation Thesis Title: not public, defended in 1988
3. Post-Doctoral Course of Tomsk State University, Russia, Dissertation Thesis Title: not public, graduated from 1999 (Doctor Nauk Diploma on Physics and Mathematics: Resolution 25d/37 of the High Attestation Committee of Science and Education Ministry), 2000

Addresses:

Occupation:

1. Institute of Monitoring of Climatic and Ecological Systems SB RAS,
Academicheskii Ave., 10/3, 634055, Tomsk, Russia Federation
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FAX: +7(3822) 491-950
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2. Siberian Physical-Technical Institute at National Tomsk State Research University, Laboratory of Advanced Materials and Technologies
Novosobornaya Sq., 1, 634050, Tomsk, Russian Federation
Тел.: +7(3822) 53-15-91, FAX: +7(3822) 53-30-34

3. Permanent residence: Altaiskiya Str., 122, Apt. 22, 634021, Tomsk, Russia
Tel.: +7 (3822) 76-50-96

Work experience:

08.1972-11.1973:	Probationer of the Institute of Atmospheric Optics SB RAS, Tomsk, Russia
11.1973-09.1981:	Junior Scientist of the Institute of Atmospheric Optics SB RAS, Tomsk, Russia
09.1981-12.1987:	Scientist of the Institute of Atmospheric Optics SB RAS, Tomsk, Russia
12.1987-11.1996:	Senior Staff Scientist of the Institute of Atmospheric Optics SB RAS, Tomsk, Russia

12.1996-11.1999:	Post-Doctoral Student of Tomsk State University, Tomsk, Russia
1999.12-2000.07:	Senior Staff Scientist Major Scientist of the Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk Russia
2000.07-2011.09:	Leading Scientist of the Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia
2011.01-Present	Chief Scientist of the Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia
2011.07-Present	Leading Scientist of National Tomsk State Research University, Tomsk, Russia

Main fields of scientific researching:

Parametric Frequency Converters within and into Mid IR and further into THz spectral ranges

Nonlinear crystals

Force Optics Systems

Mid-IR Differential Absorption Lidars: Trace Gas, Topographical Target (TT), Differential Absorption and Scattering (DAS) types

Photon counting systems

Professional Concurrent Posts (last 10 years):

1. Expert of the Representation of Foreign Affair Ministry of Russia Federation in Vienna, Austria in the field of common weapons, dual use goods and technologies. 2012-Present time
2. Editorial Board of the Chinese Optics Journal, 2010-Present time
3. Organizing Committee Member and Section Chairman of the International Conference "Atomic and Molecular Pulsed Lasers" (AMPL'2005, AMPL'2007, AMPL"2009, AMPL2011, September 2013, September 2015)
4. Laser Interaction with Matter International Symposium (LIMIS'2010), CIOMP, Changchun, China, August 2010, co-chairman
5. Chairman of "Nonlinear Optics" Section of "Laser Interaction with Matter International Symposium (LIMIS'2010), CIOMP, Xi'An, China, August 2012
6. Supervisor of 7 PhD Students and 4 Post-Doctoral Students.

Awards:

1. Diploma and Gold Medal award for International Scientific Cooperation of the Chinese Academy of Sciences, President CAS, January 2014
2. Gratitude for highly professional labor. National Tomsk State Research University, President. 2013
3. Best paper award (cover page) of CrystEngComm., V.15, No.32, pp. 6275-6432, 2013 (IC 3.879). Editorial Board, 2013
4. Diploma of Tomsk Scientific Center of Siberian Branch of Russian Academy of Sciences for fruitful scientific activity, President of Tomsk Scientific Center, 2013
5. Visiting Professor of State Key Laboratory on the Laser Interaction with Matter, Changchun Institute of Optics, Fine Mechanics and Physics of the CAS for 2014-2015, Changchun, China. Laboratory Director
6. Award: Visiting Professor CAS, 2011-2013, President CAS

7. Diploma and President SB RAS V.A. Koptyug medal for “Design of Lidar methods, technologies and remote atmospheric monitoring systems for Lidar Set “CIS LiNet” of SNG countries”, resolution No.33, 2008, President SB RAS and president of the National Academy of Sciences of the Belarus
8. Bonuses for one of best scientific results of:

- Siberian Branch of Russian Academy of Sciences: 1999, 2002, 2003, 2005 and 2007, Presidium SB RAS
- Russian Academy of Sciences, 1988, Presidium RAS

9. Honorary breastplate “Silver sigma” of SB RAS, 2007, Presidium SB RAS
10. Diploma of Russian Academy of Sciences for best scientific results: resolution No.09/01 of 07 February 2007, President RAS
11. Best paper award, 2007, Huang J., Ji G.J., Shen T., Yu.V. Andreev, Shaiduko A.V., Lanskii G.V. Influence of composition ratio variation on optical frequency con version in mixed crystals. I. Gradual variation of composition ratio. JOSA B, 2007, V. 24, No.9, P.2443-2453, 2007, Scientific Societies of USA
12. Breastplate “Honorary veteran of SB RAS”, certificate No.17236, 2006, Presidium SB RAS
13. Diploma of SB RAS, 2002, resolution No.27, Presidium SB RAS
14. Tomsk Province laureate in education and science “Best results in education and researching in 2001”, 2001, Tomsk Province Major.
15. Bonus of the Central Committee of the USSR Communist Party, Council of Ministers, Central Labor Committee and Central Committee of the Young Communist Party League, 1984, resolution No.145 of 09.02.1984
16. Silver medal of all over USSR exhibitions (VDNH) for “Design of a variety of high efficient mid-IR parametric frequency converters”, 1988, awarded by Nobel Prize Laureate Academician A.M. Prokhorov

Main publications:

Books:

1. Yu.M. Andreev, V.G. Voevodin, A.P. Vyatkin, V.V. Zuev. Optoelectronic parts. Chapter 2. Nonlinear $A_2B_4C_2^5$ crystals for IR laser frequency converters. Ed. V.E. Zuev, MGRIP “RASKO”, 1992, 184 p.
2. Yu.M. Andreev, V.G. Voevodin, P.P. Geiko, V.A. Gorobec, O.G. Lanskaya, V.O. Petukhov, N.P. Soldatkin, V.A. Gorobec, A.A. Tikhomirov. 2004, IOA SB RAS, 525 p.
3. Pulsed lasers on atomic and molecular transitions. / Ed. V.F. Tarasenko/ STT Publishing, Tomsk, Russia, 2014. 450 p. Chapter 6. J.J. Huang, Yu.M. Andreev, G.V. Lanskii, A.V. Shaiduko. Actual questions of nonlinear crystal optics. P. 361-450.

Patents:

1. 7 patents (not public)
2. Patent RU 2011134404 of 08.29.2012; Yu.M. Andreev, K.A. Kokh, G.V. Lanskii, V.A. Svetlichnyi. “Method of characterization of changing of normal refraction index of nonlinear GaSe crystal”.

Main papers published in regular journals:

1. Z.-S. Feng, J. Guo, J.-J. Xie, L.-M. Zhang, J.-Y. Gao, Yu.M. Andreev, T.I. Izaak, K.A. Kokh, G.V. Lanskii, A.V. Shaiduko, A.V. Shabalina, V.A. Svetlichnyi. GaSe:Er crystals for SHG in the infrared spectral range. Opt. Commun., V.318, P. 205–211, 2014.
2. J.F. Molloy, M. Naftaly, Yu.M. Andreev, G.V. Lanskii, I.N. Lapin, A.I. Potekaev, K.A. Kokh, A.V. Shabalina, A.V. Shaiduko, V.A. Svetlichnyi. Dispersion properties of GaS studied by THz-TDS. CrystEngComm., V.16, No.10, P.1995-2000, 2014.
3. J. Guo, D. J. Li, J. J. Xie, L. M. Zhang, K. Kokh, Yu. Andreev, T. Izaak, G. Lanskii, A. Shaiduko, V. Svetlichnyi. Characterization of optical quality of GaSe:Al crystals by exciton absorption peak parameters. J. of Material Science: Materials in Electronics, Volume 25, Issue 4, Page 1757-1760, 2014. DOI 10.1007/s10854-014-1795-4
4. Z.-S. Feng, Z.-H. Kang, X.-M. Li, J.-Y. Gao, Yu. M. Andreev, V.V. Atuchin, K. A. Kokh, G. V. Lanskii, A.I. Potekaev, A.V. Shaiduko, V.A. Svetlichnyi. Impact of fs and ns pulses on solid solution crystals $Ga_{1-x}In_xSe$ and $GaSe_{1-x}S_x$. AIP Advances, Vol.4, Issue 3, 037104(1-6), 13 March 2014. DOI: 10.1063/1.4868626
5. J Guo, D-J Li, J-J Xie, L-M Zhang, Z-S Feng, Yu M Andreev, K A Kokh, G V Lanskii, A I Potekaev, A V Shaiduko and V A Svetlichnyi. Limit pump intensity for sulfur-doped gallium selenide crystals. Laser Phys. Lett., V.11, No.5, 2014, 055401. DOI:10.1088/1612-2011/11/5/055401 (http://iopscience.iop.org/1612-202X/11/5/055401)
6. Z.W. Chao, Y.H. An, Y.M. Andreev，S.G. Grechin, G.V. Lankii. Simulation of thermo-optic coupling in the thermally anisotropic crystal GaSe for second harmonic generation. Laser Phys. Lett. 11(2014) 075402. DOI: 10:1088/1612-2011/11/7/075402
7. Jingguo Huang, Zhiming Huang, Jingchao Tong, Cheng Ouyang, Junhao Chu, Yury Andreev, Konstantin Kokh, Grigory Lanskii, Anna Shaiduko Intensive terahertz emission from $GaSe_{0.91}S_{0.09}$ under collinear difference frequency generation // Appl. Phys. Lett. 2013. V. 103. P. 81104. http://dx.doi.org/10.1063/1.4818764
8. J. Guo, J.-J. Xie, L.-M. Zhang, D.-J. Li, G.-L. Yang, Yu. M. Andreev, K. A. Kokh, G. V. Lanskii, A. V. Shabalina, A. V. Shaiduko, V. A. Svetlichnyi Characterization of Bridgman grown GaSe:Al crystals // CrystEngComm 2013. V. 15. P. 6323-6328. (Cover page). http://dx.doi.org/10.1039/c3ce40116b
9. C.W. Luo, H.J. Wang, S.A. Ku, H.-J. Chen, T.T. Yeh, J.-Y. Lin, K.-H. Wu, J.-Y. Juang, B.L. Young, T. Kobayashi, C.-M. Cheng, C.-H. Chen, K.-D. Tsuei, R. Sankar, F. Chou, K. Kokh, O.E. Tereshchenko, E.V. Chulkov, Yu.M. Andreev, G. Gu. Snapshots of Dirac fermions near the Dirac point in topological insulators // Nano Letters, V.13, P.579705802, 2013. http://dx.doi.org/10.1021/nl4021842
10. M. Naftaly, J. F. Molloy, G. V. Lanskii, K. A. Kokh, Yu. M. Andreev Terahertz time-domain spectroscopy for textile identification // Appl. Opt. 2013. V. 52, No. 19. P. 4433-4437. http://dx.doi.org/10.1364/AO.52.004433
11. J.-J. Xie, J. Guo, L.-M. Zhang, D.-J. Li, G.-L. Yang, F. Chen, K. Jiang, M.E. Evdokimov, M.M. Nazarov, Yu.M. Andreev, G.V. Lanskii, K.A. Kokh, A.E. Kokh, V.A. Svetlichnyi Optical properties

of non-linear crystal grown from the melt GaSe–$AgGaSe_2$ // Opt. Commun. 2013. V. 287. P. 145-149. http://dx.doi.org/10.1016/j.optcom.2012.09.034

12. S.-A. Ku, W.-C. Chu, C.-W. Luo, Yu. Andreev, G. Lanskii, A. Shaiduko, T. Izaak, V. Svetlichnyi. Optimal Te-doping in GaSe for non-linear applications // Optics Express, 2012, V.20, No. 5, P. 5029-5037. http://dx.doi.org/10.1364/OE.20.005029
13. J. Guo, Z.-H. Kang, Z.-S. Feng, Y. Jiang, J.-Y. Gao, J.-J. Xie, L.-M. Zhang, V. Atuchin, Yu. Andreev, G. Lanskii, A. Shaiduko. Tellurium and sulphur doped GaSe for mid-IR applications // Applied Physics B: Lasers and Optics, 2012, V. 108, No. 3, 545-552. http://dx.doi.org/10.1007/s00340-012-5067-9
14. W.-C. Chu, S.-A. Ku, H. J. Wang, C.-W. Luo, Yu. M. Andreev, Grigory Lanskii, T. Kobayashi. Widely linear and non-phase-matched optics-to-THz conversion on GaSe:Te crystals // Optics Letters, 2012, V.37, No.5, P.945-947. http://dx.doi.org/10.1364/OL.37.000945
15. Shin An Ku, Chih Wei Luo, Yu. M. Andreev, Grigory Lanskii. Comment on "$GaSe_{1-x}S_x$ and $GaSe_{1-x}Te_x$ thick crystals for broadband terahertz pulses generation" [Applied Physics Letters 99, 081105 (2011)] // Applied Physics Letters, 2012, V.100, 136103ю http://dx.doi.org/10.1063/1.3698457
16. A.A. Ionin, I.O. Kinyaevskiy, Yu.M. Klimachev, A.A. Kotkov, A.Yu. Kozlov, Yu.M. Andreev, G.V. Lanskii, A.V. Shaiduko, A.V. Soluyanov. Cascaded carbon monoxide laser frequency conversion into the 4.3–4.9 μm range in a single $ZnGeP_2$ crystal // Optics Letters, 2012, V. 37, Issue 14, pp. 2838–2840. http://dx.doi.org/10.1364/OL.37.002838
17. A.A. Ionin, J. Guo, L.-M. Zhang, J.-J. Xie, Yu.M. Andreev, I.O. Kinyaevsky, Yu.M. Klimachev, A.Yu. Kozlov, A.A. Kotkov, G.V. Lanskii, A.N. Morozov, V.V. Zuev, A.Yu. Gerasimov, S.M. Grigoryants. Mode-locked CO laser frequency doubling in $ZnGeP_2$ with 25% efficiency. Laser Physics Letters, 2011, V.8, No.10, P.723-728.
18. Y.-F. Zhang, R. Wang, Z.-H. Kang, L.-L. Qu, Y. Jiang, J.-Y. Gao, Yu.M. Andreev, G.V. Lanskii, K. Kokh, A.N. Morozov, A.V. Shaiduko, E. Vinnik, V.V. Zuev. $AgGaS_2$ and Al Doped GaSe for IR Application // Optics Communications. 2011. V. 284, No. 6. P. 1677-1681.
19. Andreev Yu.M., Kokh K.A., Lanskii G.V., Morozov A.N. Structural characterization of pure and doped GaSe by non-linear optical method // J. Crystal Growth, 2011, V.318, P.1164-1166.
20. K.A. Kokh, Yu.M. Andreev, V.V. Svetlichnyi, V.V. Zuev. Growh of GaSe and GaS single crystals. Cryst. Res. Technol., 2011, V.46, No.4, P.327-330.
21. Luo Chih-wei, Ku Shin-an, Chu Wei-chen, Tang Wei-tun, Morozov A.N., Lansky G.V., Andreev Yu.M., Zuev V.V. The optical properties of sulfur-doped GaSe crystals in terahertz frequency range // Optics and Precision Engineering, 2011, V.19, No.2, P.354-357.
22. Jin Jer Huang, Tao Shen, Gang Ju Ji, Wei Gao, Hong Wang, Yu.M. Andreev, A.V. Shaiduko, 2008, Optics Communications, Vol.281, pp. 3208-3216.
23. H.-Z. Zhang, Z.-H. Kang, Y. Jiang, J.-Y. Gao, F.-G. Wu, Z.-S. Feng, Yu.M. Andreev, G.V. Lanskii, A.N. Morozov, E.I. Sachkova, S.Yu. Sarkisov, 2008, Optics Express, Vol.16, No.13, pp.9951-9957.
24. Z.-S. Feng, Z.-H. Kang, F.-G. Wu, J.-Y. Gao, Y. Jiang, H-Z. Zhang, Yu.M. Andreev, G.V. Lanskii, V.V. Atuchin, T.A. Gavrilova, 2008, Optics Express, Vol.16, No.13, pp.9978-9985.
25. J. Huang, G. J. Ji, T. Shen, Yu.M. Andreev, A.V. Shaiduko, G.V. Lanskii, 2007, JOSA B, Vol.24, No.9,

pp.2443-2453. (Referred in Fast Science Journal)

26. J. Huang, Wei Gao, Tao Shen, Bei Li Mao, Yu.M. Andreev, A.V. Shaiduko, G.V. Lanskii, Udit Chatterjee and V.V. Atuchin, 2007, JOSA B, V.24, No.12, pp.3081-3090. (Referred in Fast Science)
27. T.-J. Wang, Z.-H. Kang, H.-J. Zhang, Z.-S. Feng, Y. Jiang, J.-Y. Gao, Yu.M. Andreev, G.V. Lanskii, A. Shaiduko, 2007, J. Phys. D: Appl. Phys., Vol.40, pp.1357-1362.
28. Tie-Jun Wang, Qiong-Yi He, Zhi-Hui Kang, Hong-Zhi Zhang, Yun Jiang, Zhi-Shu Feng, Jin-Yue Gao, Yury Andreev, Grigory Lanskii, Victor Atuchin, Oleg Parasyuk, 2007, Applied Physics Letters, Vol.90, 181913 (3 pp.).
29. Y. Qu, Z.-H. Kang, T.-J. Wang, Y. Jiang, Y. M. Andreev, J.-Y. Gao, 2006, Laser Physics Letters, Vol. 4, No.3, pp.238-241.
30. S. Das, U. Chatterjii, C. Ghosh, S. Gaugopadhyay, Yu.M. Andreev, G. Lanskii and V.V. Badikov, 2006, Optics Communications, Vol.259, No.2, pp.868-872.
31. Yu.M. Andreev, V.V. Atuchin, G.V. Lanskii, A.N. Morozov, L.D. Pokrovsky, S.Yu. Sarkisov, O.V. Voevodina, 2006, Materials Science and Engineering B, Vol.128, pp.205-210.
32. Subhasis Das, Chittaranjan Ghosh, Sudipta Gangopadhyay, Yuri M. Andreev, V.V. Badikov, 2006, Jap. J. Appl. Phys, Vol.45, No.7, pp.5795-5797.
33. Huang J.–J., Atuchin V.V., Andreev Yu.M., Lanskii G.V., Pervukhina N.V., 2006, J. Cryst. Growth, Vol.292, pp.500-504.
34. S. Das, U. Chatterjee, C. Ghosh, S. Gangopadhyay, Yu.M. Andreev, G. Lanskii, V.V. Badikov, 2006, Opt. Commun., Vol.259, No.2, pp.868-872.
35. S. Das, U. Chatterjee, C. Ghosh, S. Gangopadhyay, Yu.M. Andreev, G. Lanskii, V.V. Badikov, 2006, Optics Communications, Vol.263, pp.352.
36. T.-J. Wang, Z.-H. Kan, H.-J. Zhang, Q.-Y. He, Y. Qu, Z.S. Feng, J. Jiang, J.-Y. Gao, 2006, Optics Express, Vol. 14, No. 26, pp.13001-13006.
37. S. Das, C. Ghosh, OG. Voevodina, Yu.M. Andreev, S.Yu. Sarkisov, 2006, Appl. Phys. B, Vol.81, No.8, pp.43–46.
38. V.G. Voevodin, S.A. Bereznaya, Z.V. Korotchenko, A.N. Morozov, S.Yu. Sarkisov, N.C. Fernelius, J.T.Goldstein, 2005, Res. Soc. Symp. Proc., Vol.829, pp.375-382.
39. Yu.M. Andreev, V.V. Atuchin, G.V. Lanskii, N.V. Pervukhina, V.V. Popov, N.C. Trocenco, 2005, Solid State Sciences, Vol.7, No.10, pp.1188–1193.
40. J.-J. Huang, Yu.M Andreev., G.V. Lanskii, A.V. Shaiduko, S. Das, U. Chatterjee, 2005, Appl. Optics, Vol.44, No. 35, pp.1–7.
41. Yu.M. Andreev, P.P. Geiko, M.V. Kabanov, 2004, Autometry, Vol.40, No.5, pp.119-133.

In total: Over 400 publications including 150 papers in open referred journals.

During last 5 years:

23 papers are published in Journals indexed Web of Science, 44 indexed in Scopus, 24 in RISC.

Highlights:

1. Design of single crystal growth technology and introducing into practice of parametric frequency conversion of non-linear crystal $ZnGeP_2$ that is so called now mid-IR “standard” nonlinear crystal and in

wide use now in force optics systems (1986)

2. Design of the most extended set (over 50) of different mid-IR parametric frequency converters with record efficiency of over 80% and first all over the world mid-IR parametric frequency converter "Spectrum" (1982-1988)
3. Record (over 80%) efficiency of the parametric frequency conversion within the mid-IR range (1986)
4. Design of a set of mobile remote Differential Absorption Lidar Complexes, including first of all over the world mid-IR differential absorption lidar, for toxic, pollution, etc. gas detection supplied with designed $ZnGeP_2$ parametric frequency converters (1978)
5. Improvement in the efficiency of the parametric frequency conversion into THz range by down-conversion for $2 \cdot 10^6$ times to that in the only previously published paper(1997)
6. First experimental confirmation of the advantages of solid solution crystals in the efficiency of parametric frequency conversion in comparison with that for parent crystals and $ZnGeP_2$ crystal (1993)
7. Design of the growth technology and introducing into practice of mid-IR and THz generation of doped and solid solution GaSe crystals that demonstrated up to 15 times higher efficiency to that in pure GaSe crystal (2006)

Selected (public) past and current projects:

1. "Design and field test of differential absorption trace gas analyzer lidar". Agreement on co-operation between Institute of Atmospheric Optics SB of USSR Academy of Sciences and Institute of Electronics of Bulgarian National Academy of Sciences, Engineering Manager, 01.1984-12.1984, Expanses for 2 expeditions were paid by Russian Academy of Sciences and Bulgarian Academy of Sciences, in total $30,000
2. "CO_2 laser frequency conversion". Agreement on co-operation, Invited Researcher, WPL, Boulder, USA, 01.1989-03.1989, visit expanses paid by WPL, $15,000
3. "Differential absorption gas analysis Lidar complex". Agreement between Institute of Atmospheric Optics SB RAS, Tomsk and KAIST, Taejon, South Korea, Engineering Manager, 01.1994 – 06.1996, $1,200,000
4. "Ultrasonic and optic monitoring systems". R&D program of Russia Branch of South Korea Research Company "Kumkang Hu-Tech", President, 06.1996 – 12.1997, $200,000/year
5. "Mid-IR parametric frequency converters". Agreement on co-operation between Institute of Atmospheric Optics, Tomsk, Russia and Burdwan University, West Bengal, India in the frame of Integrated Long Time Program on India-Russia co-operation, Co-principle Investigator, 01.1990-12.1992, $40,000
6. "Solid solution crystals: physical properties and application". Agreement on co-operation between Harbin Institute of Technology, Harbin, China and Institute of Monitoring of Climatic and Ecological Systems SB RAS, Invited Researcher, 01.2001-12.2005 (multiple visits), co-operative study expanses paid by Jilin University, in total $50,000
7. "Mid-IR ns and fs frequency converters". Agreement on co-operation between Jilin University, Changchun, China and Institute of Monitoring of Climatic and Ecological Systems SB RAS, Invited Researcher, 12.2004-07.2009 (multiple visits), co-operative study expanses paid by Jilin University, in

total $70,000

8. “Fundamental basis of the laser diagnostic complex design”. Regional Grant under RFBR support “Ob”, Section Engineering Manager, No.05-02-98005-r_ob_a», 2005-2007, $40,000.
9. “Silicon-based semiconductor nanostructured materials for optoelectronics”. Federal Agency on Science and Innovations of the Ministry on Science and Education of Russia Federation, No.02.513.11.3156, Section Engineering Manager, 2007-2008, $100,000
10. “Electrooptical and rectification effects study in non-linear solid solution crystals $GaSe_{1-x}S_x$ and $GaSe_{1-x}Te_x$ that are potential materials for high efficient THz generator and detector”. RFBR Grant No.09-02-99036-r_ofi, researcher, 2009-2010, $53,300
11. “Optical systems based on discrete and continuously tunable lasers, optical frequency converters and super high speed frequency converters and super fast semiconductor detectors and their technological applications”. Country Grant No.02.740.11.0444 in the frame of Federal Purpose Program “Scientific and scientific-pedagogical staff of innovative Russia”. Federal Agency on Innovations, Section Engineering Manager, 2009-2011, $300,000
12. “Study of terahertz generation processes in doped GaSe crystals ”, Joint Grand RFBR, Russia (Tomsk State University) and NSC, Taiwan (National Chuao Tung University), Hsinchu, Taiwan, Co-principle Investigator, 2009-2011, $60,000
13. “Extending of CO_2 laser emission spectrum within mid-IR and further into THz range by application of new non-linear crystalline materials”. Joint Research Project of National Academy of Sciences of Belarus and SB RAS No.10 of 2010, Engineering Manager, 2010-2012, $60,000
14. “Optical properties of modified non-linear GaSe crystals in THz range”. RFBR Project No.10-02-01452-a, Engineering Manager, 2010-2012, $20,000
15. “Study of the physical processes in molecular and atomic systems, creation of laser media, non-linear crystals and photosensitive structures on basis of the study results”, Grant SS-4297.2010.2 2010-2012 in the frame of Federal purpose program “Scientific and scientific-pedagogical staff of innovative Russia”. Federal Agency on innovations, Section Engineering Manager, 2009-2011, $33,300
16. Joint project of fundamental research between NAS of Belarus and SB RAS No. 10 (2010) “Expanding the range of the CO2 lasers in the mid and far-IR ranges with new nonlinear crystals” 2010-2011 (Engineering Manager).
17. Grant of the President of the Russian Federation, Scientific School SS-4297.2010.2 “Investigation of the physical processes in molecular and atomic systems, building on their basis of optical and laser media, nonlinear crystals and photosensitive structures”. Section: “Physics and Astronomy”, 2010-2013 (Engineering Manager of a subsection).
18. RFBI 10-02-01452_a “Investigation of the optical and nonlinear optical properties of modified GaSe crystals in a terahertz spectrum region” 2010-2011 (Engineering Manager).
19. SB RAS Program VII.63.3. “Climate changes in the Arctic and Siberia under the influence of volcanism. Project VII.63.3.1. Volcanic perturbation of the atmosphere and climate of Siberia and sub-Arctic: current state and paleoreconstruction” 2010-2012 (Engineering Manager).
20. Integration Project of SB RAS No. 46 (Country registration No. 01201258315) “Chalcogenide nonlinear crystals for laser frequency converters ultra-wideband” 2012-2014, $300,000 (Engineering Manager).

21. SB RAS, Project VIII.80.2.4. “Scientific basis for the development of methods, technologies and tools to study surfaces and Earth interiors, atmosphere, including the ionosphere and magnetosphere, hydrosphere and cryosphere; numerical simulation and Geoinformatics: Spatial Data Infrastructure and GIS technology” 2013-2015, $ (Principle Investigator).
22. RFBI 12-02-33174_mol_a_ved “The effect of the concentration of dopants in nonlinear GaSe crystals on their anisotropy, the temperature variance of the physical properties and processes of parametric frequency conversion of laser radiation” 2012-2014, $200,000 (Engineering Manager).
23. RFBI 13-02-00667_a “Thermo-stable optical processes in ferroelectrics crystals” 2013-2014, $28,600 (Engineering Manager).

International activity:

1. June-July 1984: Engineering manager of the Institute of Electronics, Bulgarian Academy of Sciences, Bulgaria, Sofia
2. January 1989: Invited Researcher, Wave Propagation Laboratory, Boulder, Calorado, USA
3. May 1990, March 2005: Invited Researcher, Burdwan University, Burdwan, West Bengal, India
4. January 1994 - July 1996 (2 year stay in total): Engineering Manager of KAIST, Taejon, South Korea
5. July 1996 - December 1997: President of the Russia Branch of South Korea - Russia Joint Research Company Kumkang Hu-Tech Company Ltd., Seoul, South Korea-Tomsk, Russia
6. December 2001, June 2002, November 2002: Invited Researcher of Harbin Institute of Technology, Harbin, China
7. April 2009, May-July 2010, May-June 2011: Principle Investigator of National Chuao Tung University, Hsinchu, Taiwan
8. December 2004, May-July 2005, May-July 2006, December 2007-February 2008, May-July 2009: Invited Researcher, Jilin University, Changchun, China
9. Twelve visits (2005-2014, over 3 year stay in total): Invited researcher of Changchun Institute of Optics Fine Mechanics and Physics CAS, Changchun, China (In total 5 year stay in China)
10. August 2013 and May-July 2014: Invited researcher of National Physical Laboratory, London, UK
11. September 2005, September 2007, September-October 2009: Chairman of Nonlinear Optics Session of 7^{th}, 8^{th} and 9^{th} International Conference on Atomic and Molecular Pulsed Lasers, Tomsk, Russia
12. Member of Editorial Board of Chinese Journal of Optics and Applied Optics (2009 - Present time)
13. August 2010: Co-Chair of Laser Interaction with Matter Symposium, Changchun, China
14. September 9-12, 2012: Section Chair of Laser Interaction with Matter Symposium, Xi’An, China
15. OSA member, 2010-nowadays
16. Expert of the Representation Office of Foreign Affair Ministry in International Organizations in Austria, Vienna in the field of common weapon, dual use goods and technologies. 2012-Present
17. Visiting Professor of Chinese Academy of Sciences on 2011-2012 (prolonged on 2013). President of Chinese Academy of Sciences, 2010 г.
18. Visiting-Professor of National Key Laboratory of Laser Interaction with Matter, Institute of Optics, Fine Mechanics and Physics of Chinese Academy of Sciences, Changchun, China on 2014-2015. President of the Laboratory, 2014