Vasil Saroka

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PERSONAL DATA

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Google Scholar Citations:	Citation Metrics
Research Gate:	Profile

EDUCATION

- 2011 M. Eng. (Engineer-Physisists), Belarusian State University, Physics Department, Minsk, Belarus.
- 2012 M. Sc. in Physics, Belarusian State University, Physics Department, Minsk, Belarus.
- present PhD student

EXPERIENCE

Internships

- University of Southampton, School of Physics and Astronomy, Laboratory for Hybrid Optoelectronics: 01/08/2011-30/09/2011 – project ”Engineering nonlinearities in organic semiconductor microcavities”, supervisor: Prof Pavlos Lagoudakis pavlos.lagoudakis(at)soton.ac.uk; [funded by IAESTE UK].
- Emanuel Institute of Biochemical Physics, Russian Academy of Science: 01/10-30/11/2013 – project “Electronic properties of edge-modified zigzag-shaped graphene nanoribbons”, supervisor Prof. Leonid Chernozatonskii chernol-43(at)mail.ru; [funded by Russian Foundation for Basic Research grant “РФФИ № 13-02-90919”].
- University of Namur: 02/06/-30/06/2014 – project “Electromagnetic properties of graphene”, supervisor Prof. Philippe Lambin; [funded by EU FP7 project FAEMCAR (FP7-318617)].

Employment

- Research Institute for Nuclear Problems, Belarusian State University, Minsk, Belarus: 02/2010-31/06/2011 – Laboratorian; 17/07/2011–31/07/2012 – Engineer; 01/08/2012–01/04/2014 – Junior Research Assistant; 01/04/2014 – present Junior Researcher.
- Belarusian State University, Physics Department, Laboratory of Scientific Instrumentation, Minsk, Belarus: 03-12/2014 – Junior Researcher.
- Private Trade and Production Enterprise «ММ софт-троник», Minsk, Belarus: 18/10/2011–01/04/2012 – Math and Physics Content Developer.
- University of Exeter, College of Engineering, Mathematical and Physical Sciences, Exeter, UK: 08/2014–present – Early Stage Researcher

Teaching

- Belarusian State University, Physics Department, Minsk, Belarus: 02-05/2013 – 3rd year labs in Nuclear Physics.

RESEARCH INTERESTS

Electronic, optical and electromagnetic properties of low-dimensional nanostructures.

PUBLICATIONS

Articles:

1. Konstantin G. Batrakov, Vasily A. Saroka, Sergey A. Maksimenko, Christian Thomsen, "Plasmon polariton deceleration in graphene structures", J. Nanophotonics **6**, 061719 (2012). http://dx.doi.org/10.1117/1.JNP.6.061719
2. В.А. Сороко, К.Г. Батраков, Л.А. Чернозатонский, «Графеновые наноленты с зигзагообразно модифицированными краями: структура и электронные свойства», ФТТ, Т.56, №10, 2066 (2014). http://journals.ioffe.ru/ftt/2014/10/p2066-2075.pdf
3. V. A. Saroka, K. G. Batrakov, and L. A. Chernozatonskii, "Edge-modified zigzag-shaped graphene nanoribbons: Structure and electronic properties", Phys. Solid State **56**, 2135 (2014). http://dx.doi.org/10.1134/S106378341410028X
4. V. A. Saroka, K. G. Batrakov, V. A. Demin, and L. A. Chernozatonskii, "Band gaps in jagged and straight graphene nanoribbons tunable by an external electric field", J. Phys. Condens. Matter **27**, 145305 (2015). http://dx.doi.org/10.1088/0953-8984/27/14/145305
5. В. А. Сороко, К. Г. Батраков, «Зигзагообразные сверхрешетки на основе графеновых нанолент: структура и электронные свойства», Известия ВУЗов. Физика, Т. 59, №5, 27 (2016).
6. H. Abdelsalam, M. H. Talaat, I. Lukyanchuk, M. E. Portnoi, and V. A. Saroka, "Electro-absorption of silicene and bilayer graphene quantum dots", J. Appl. Phys. **120**, 014304 (2016). http://dx.doi.org/10.1063/1.4955222
7. V. A. Saroka and K. G. Batrakov, "Zigzag-Shaped Superlattices on the Basis of Graphene Nanoribbons: Structure and Electronic Properties", Russ. Phys. J. **59**(5), 633 (2016). http://dx.doi.org/10.1007/s11182-016-0816-6, view-only version

8. ...

Proceedings and others:

1. K. Batrakov, V. Soroko / Electron beam instability in graphene // Physics, Chemistry and applications of nanostructures: Reviews and Short Notes, Proceedings of International Conference Nanomeeting – 2011, Minsk, Belarus, 24 – 27 May 2011 / Editors: V.E. Borisenko, S.V. Gaponenko, V.S. Gurin, C.H. Kam.— Singapore, World Scientific, 2011. — P.307–310. http://dx.doi.org/10.1142/9789814343909_0073
2. K. Batrakov, S. Maksimenko, V. Soroko, C. Thomsen / Plasmon-polariton slowing down in graphene structures // Fundamental and Applied NanoElectroMagnetics FANEM'12 Conference Proceedings, Minsk, Belarus, May 22-25, 2012. –P.35. http://nano.bsu.by/docs/FANEM12-PROCEEDINGS.pdf
3. V. Saroka / Reduction of plasmon-polariton phase velocity in a double-layer graphene // Physics, Chemistry and Applications of Nanostructures: Reviews and Short Notes, Proceedings of International Conference Nanomeeting – 2013, Minsk, Belarus, 28 – 31 May 2013 / Editors: V.E. Borisenko, S.V. Gaponenko, V.S. Gurin, C.H. Kam. — Singapore, World Scientific, 2013. — P.218-221. http://dx.doi.org/10.1142/9789814460187_0054
4. O. Fesenko et al. (eds.), Nanomaterials Imaging Techniques, Surface Studies, and Applications, Springer Proceedings in Physics 146, DOI: 10.1007/978-1-4614-7675-7_9, Book ISBN: 978-1-4614-7674-0, K. Batrakov and V. Saroka, Chapter 9 "Surface Plasmon Retardation in Graphene Bilayer". http://link.springer.com/10.1007/978-1-4614-7675-7_9
5. V.A. Saroka, K.G. Batrakov / Dirac electrons of graphene nanoribbons tunable by transverse electric field // Physics, Chemistry and Application of Nanostructures: Reviews and Short Notes, Proceedings of International Conference Nanomeeting – 2015, Minsk, Belarus, 26 – 29 May 2015 / Editors: V.E. Borisenko, S.V. Gaponenko, V.S. Gurin, C.H. Kam. — Singapore, World Scientific, 2015. –P.240-243. http://dx.doi.org/10.1142/9789814696524_0060
6. M. E. Portnoi, V. A. Saroka, R. R. Hartmann, and O. V. Kibis / Terahertz Applications of Carbon Nanotubes and Graphene Nanoribbons // Proceedings of IEEE Computer Society Annual Symposium on VLSI, ISVLSI 2015, Montpellier, France, 8-10 July, 2015 / Editor: L. O'Conner. –Los Alamitors, IEEE Computer Society CPS, 2015. – P.456–459. http://dx.doi.org/10.1109/ISVLSI.2015.97