

# CURRICULUM VITAE

## PERSONAL DATA:

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## EDUCATION:

- 2005-2010 - Bachelor. in Physics, in progress, Belarus State University, Physical Department, Minsk, Belarus. Subject of thesis project: nanotubes, EM interactions, composites.
- 2010-2011 - M. Sc. in Physics, Belarus State University, Physical Department, Minsk, Belarus. Subject of examination: nanotubes, EM interactions.

## EXPERIENCE:

### **Institute for Nuclear Problems, Belarus State University, Minsk, Belarus**

08/2010 – 02/2011 (Engineer-Researcher).

03/2011 – Present (Junior Researcher)

## SCHOLARSHIP:

- **Lithuanian National Scholarship:** September – November 2013.
- **World Federation of Scientists** “Experimental study and theoretical simulations of electromagnetic response of carbon foams and polymer/nanocarbon composites” 10. 2013- 09. 2014.

## PUBLICATIONS

### Papers:

1. P. Kuzhir, A. Paddubskaya, D. Bychanok, A. Nemilentsau, M. Shuba, A. Plusch, S. Maksimenko, S. Bellucci, L. Coderoni, F. Micciulla, I. Sacco, G. Rinaldi, J. Macutkevic, D. Seliuta, G. Valusis, J. Banys, Microwave probing of nanocarbon based epoxy resin composite films: toward electromagnetic shielding, **Thin Solid Films**, **519(12)**, 4114-4118, 1 April (2011) [doi:10.1016/j.tsf.2011.01.198](https://doi.org/10.1016/j.tsf.2011.01.198)
2. D. S. Bychanok, M. A. Kanygin, A. V. Okotrub, M. V. Shuba, A. G. Paddubskaya, A. O. Plyushch, P. P. Kuzhir, S. A. Maksimenko, Anisotropy of the Electromagnetic Properties of Polymer Composites Based on Multiwall Carbon Nanotubes in the Gigahertz Frequency Range, **JETP Letters**, **93 (10)**, 607–611 (2011) [doi:10.1134/S0021364011100043](https://doi.org/10.1134/S0021364011100043)
3. P.P. Kuzhir, S.A. Maksimenko, A.O. Plyushch, K.N. Lapko, A.I. Lesnikovich, V.A. Lomonosov, E.A. Frolova, P.V. Sedyshev, V.N. Shevtsov, A.S. Kurilin, A.G. Kurennya, A.N. Okotrub, Thermal stable phosphates filled with micro-sized boron compounds and carbon nanotubes: towards ionizing radiation shielding, In: Physics, Chemistry and Applications of Nanostructures: Reviews and Short Notes to Nanomeeting, May 27-

- 29, 2011, V.E.Borisenko, S.V.Gaponenko, V.S.Gurin & C. H. Kam (Eds.), pp. 114-117, World Scientific, Singapore, 2011. [doi:10.1142/9789814343909\\_0026](https://doi.org/10.1142/9789814343909_0026)
4. A. Paddubskaya, D. Bychanok, A. Plyushch, P. Kuzhir, A. Nemilentsau, S. Maksimenko, S. Bellucci, L. Coderoni, F. Micciulla, I. Sacco, G. Rinaldi, Epoxy Resin/SWCNT Shielding Paint for Super-High-Frequency Range, **J. Nanoelectronics and Optoelectronics**, Vol. 7, 81–86, 2012 [doi: 10.1166/jno.2012.1222](https://doi.org/10.1166/jno.2012.1222)
  5. P. Kuzhir, V. Ksenevich, A. Paddubskaya, T. Veselova, D. Bychanok, A. Plusch, A. Nemilentsau, M. Shuba, S. Maksimenko, S. Bellucci, L. Coderoni, F. Micciulla, I. Sacco, G. Rinaldi, CNT based epoxy resin composites for conductive applications, **Nanoscience and Nanotechnology Letters**, 2011, Vol. 3, No. 6 (6pp) [doi:10.1166/nnl.2011.1252](https://doi.org/10.1166/nnl.2011.1252).
  6. M. V. Shuba, A. G. Paddubskaya, A. O. Plyushch, P. P. Kuzhir, G. Ya. Slepyan, S. A. Maksimenko, V. K. Ksenevich, P. Buka, D. Seliuta, I. Kasalynas, J. Macutkevic, G. Valusis, C. Thomsen, A. Lakhtakia, Experimental evidence of localized plasmon resonance in composite materials containing single-wall carbon nanotubes, **PHYSICAL REVIEW B** 85, 165435 (2012) [doi:10.1103/PhysRevB.85.165435](https://doi.org/10.1103/PhysRevB.85.165435)
  7. Plyushch A., Paddubskaya A., Kuzhir P., Maksimenko S., Coderoni L., Micciulla F., Sacco I., Bellucci S., NANOCARBON modified epoxy resin and microwaves, **Nanocarbon Modified Epoxy Resin and Microwaves, Fullerenes, Nanotubes and Carbon Nanostructures**, 20:4-7, 496-501, 2012 [doi: 10.1080/1536383X.2012.655666](https://doi.org/10.1080/1536383X.2012.655666)
  8. M.A. Kanygin O.V. Sedelnikova, I.P. Asanova, L.G. Bulusheva, A.V. Okotrub, P.P. Kuzhir, A.O. Plyushch, S.A. Maksimenko, K.N. Lapko, A.A. Sokol, O.A.Ivashkevich, Ph. Lambin, **Journal of Applied Physics**, 113, 144315 (2013) (8pp) [DOI: dx.doi.org/10.1063/1.4800897](https://doi.org/10.1063/1.4800897)
  9. A. Plyushch, D. Bychanok, P. Kuzhir, S. Maksimenko, K. Lapko, A. Sokol, J. Macutkevic, J. Banys, F. Micciulla, A. Cataldo, S. Bellucci, Heat resistant unfired phosphate ceramics with carbon nanotubes for electromagnetic application **Physica Status Solidi A**, I.f. 1.525, 211, No. 11, 2580–2585 (2014), doi: 10.1002/pssa.201431306 2014
  10. D. Bychanok , A. Plyushch , K. Piasotski , A. Paddubskaya , S. Varanovich, P. Kuzhir, S. Baturkin, A. Klochkov, E. Korovin, M. Letellier, S. Schaefer, A. Szczurek, V. Fierro and A. Celzard, Electromagnetic properties of polyurethane template-based carbon foams in Ka-band, **Physica Scripta**, Volume 90, Number 9 2015
  11. Natlia Apanasevich; Aliaksei Sokal ; Konstantin Lapko; Alexander Kudlash; Vladimir Lomonosov; Artem Plyushch; Polina P. Kuzhir, PhD; Jan Macutkevic; Juras Banys; Alexander Okotrub Phosphate ceramics - carbon nanotubes composites: liquid aluminum phosphate vs solid magnesium phosphate binder, **Ceramics International**, Volume 41, Issue 9, Part B, November 2015, Pages 12147–12152, [DOI: 10.1016/j.ceramint.2015.06.033](https://doi.org/10.1016/j.ceramint.2015.06.033)
  12. Artyom Plyushch, Jan Macutkevic, Polina P. Kuzhir, Juras Banys, Vanessa Fierro, and Alain Celzard, Dielectric properties and the electrical conductivity of flat micronic graphite: polyurethane composites, **Journal of Nanophotonics** Vol. 10, 2016, 012511–(13p) DOI:10.1117/1.JNP.10.012511
  13. A. Plyushch, J. Macutkevic, P. Kuzhir, J. Banys, Dz. Bychanok, Ph. Lambin, S. Bistarelli, A. Cataldo, F. Micciulla, S. Bellucci, Electromagnetic properties of graphene nanoplatelets/epoxy composites, **Composites Science and Technology** 128 (2016) 75-83, [DOI: 10.1016/j.compscitech.2016.03.023](https://doi.org/10.1016/j.compscitech.2016.03.023)
  14. Artyom Plyushch, Polina P. Kuzhir, Sergey A. Maksimenko, Jan Macutkevič, Jūras Banys, Aliaksei Sokal, Konstantin N. Lapko, Vladislav Arkhipov, Alexander Okotrub, Grain size effect in conductive phosphate / carbon nanotube ceramics, **Ceramics International**, [DOI: 10.1016/j.ceramint.2016.12.151](https://doi.org/10.1016/j.ceramint.2016.12.151)

#### **Conference presentations**

15. Bellucci, S.; Coderoni, L.; Micciulla, F.; Rinaldi, G.; Sacco, I.; Paddubskaya, A.; Bychanok, D.; Plyushch, A.; Kuzhir, P.; Maksimenko, S.; Shuba, M.; Slepyan, S.; Macutkevic, J.; Seliuta, D.; Valusis, G.; Banys, J.; Effectiveness of microwave electromagnetic shielding in carbon based epoxy nanocomposites, 35th International

- Conference on Infrared Millimeter and Terahertz Waves (IRMMW-THz), 2010, DOI: [10.1109/ICIMW.2010.5612540](https://doi.org/10.1109/ICIMW.2010.5612540), 2010, Page(s): 1 - 2
16. S. Bellucci, L. Coderoni, F. Micciulla, I. Sacco, P. Kuzhir, A. Paddubskaya, D. Bychanok, A. Plyushch, A. Nemilentsau, M. Shuba, S. Maksimenko, G. Rinaldi, J. Macutkevic, D. Seliuta, G. Valusis, J. Banys, Carbon nanotube based composites: Microwave probing towards electromagnetic shielding, **3<sup>rd</sup> International Conference on Nanostructures Self-Assembly NanoSEA 2010**, Congress Center, Cassis, French Riviera, 28 June - 2 July 2010, Programme, <http://www.im2np.fr/nanosea2010/>
  17. S. Bellucci, L. Coderoni, F. Micciulla, G. Rinaldi, I. Sacco, A. Paddubskaya, D. Bychanok, A. Plushch, P. Kuzhir, S. Maksimenko, M. Shuba, J. Macutkevic, D. Seliuta, G. Valusis, J. Banys, Microwave Electromagnetic Shielding of Nanocarbon/Resin Composites: Comparative Study of Single-Walled, Multi-Walled Carbon Nanotubes and Carbon Black, (oral) **The 2010 IEEE International Symposium on Antennas and Propagation and CNC-USNC/URSI Radio Science meeting**, July 11-17, 2010, the Sheraton Centre Toronto Hotel in Toronto, ON, Canada, Program Talk # 321.2, <http://www.apsursi2010.org/>
  18. A. Paddubskaya, D. Bychanok, A. Plushch, P. Kuzhir, S. Maksimenko, A. Nemilentsau, S. Bellucci, L. Coderoni, F. Micciulla, G. Rinaldi, I. Sacco, J. Macutkevic, D. Seliuta, G. Valusis and J. Banys, Electromagnetic response of nanocarbon based epoxy composites: microwave and low-frequency analysis, **The Second International Workshop on Nanocarbon Photonics and Optoelectronics**, Koli/North Karelia/Finland 1-6 August 2010, <http://npo.fi/npo2010>
  19. S. Bellucci, L. Coderoni, F. Micciulla, G. Rinaldi, I. Sacco, A. Paddubskaya, D. Bychanok, A. Plushch, P. Kuzhir, S. Maksimenko, M. Shuba, S. Slepyan, J. Macutkevic, D. Seliuta, G. Valusis and J. Banys, Effectiveness of microwave electromagnetic shielding in carbon based epoxy nanocomposites, **The 35th International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz 2010**, Angelicum, Pontificia Università San Tommaso d'Aquino, Rome, Italy, 5 – 10 September 2010. <http://www.irmmw-thz2010.org/>
  20. Plyushch A., Kuzhir P., Maksimenko S.A., Coderoni L., Micciulla F., Sacco I., Rinaldi G., Bellucci S., NANOCARBON modified epoxy resin and microwaves, **Joint International Conference Advanced Carbon Nanostructures ACN'2011**, St Petersburg, Russia, July 4-8, 2011, Book of abstracts, p. 53, <http://www.ioffe.ru/ACN2011/index.html>
  21. G. Ya. Slepyan, A. M. Nemilentsau, M. V. Shuba, P. P. Kuzhir, A. Paddubskaya, D. Bychanok, A. Plushch, S. A. Maksimenko, P. N. D'yachkov, K.N.Lapko, A. G. Kureny, A. N. Okotrub, A. Lakhtakia, Electromagnetic response of the carbon nanotube based composites in the GHz and THz frequency ranges, **International Conference on Electromagnetics in Advanced Applications & IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communications**, September 12-17, 2011 Torino, Italy, <http://www.iceaa.net/>
  22. P.P.Kuzhir, S.A.Maksimenko, A.O. Plyushch, K.N.Lapko, A.I.Lesnikovich, V.A. Lomonosov, E.A.Frolova, P.V.Sedyshev, V.N.Shevtsov, A.S.Kurilin, A.G.Kurenya, A.N.Okotrub THERMAL STABLE PHOSPHATES FILLED WITH MICROSIZED BORON COMPOUNDS AND CARBON NANOTUBES: TOWARDS IONIZING RADIATION SHIELDING. Nanomeeting – 2011, Minsk, Belarus
  23. Plyushch A., Paddubskaya A., Kuzhir P., Maksimenko S., Lapko K., Sokol A., Lomonosov V., Ivashkevich O., Lesnikovich A., Okotrub A., CNT BASED HEAT-RESISTANT PHOSPHATE COMPOSITES FOR ELECTROMAGNETIC SHIELDING
  24. A Plyushch, J. Macutkevic, J. Banys, D. Bychanok, S. Maksimenko, A. Cataldo, F. Micciulla, S. Bellucci / Electromagnetic properties of graphene nanoplatelets/epoxy composites in the wide temperature range // Physics, Chemistry and Application of Nanostructures: Reviews and Short Notes, Proc. of Intern. conf. Nanomeeting -- 2015, Minsk, Belarus, May 26 – 29, 2015 / Editors: V.E. Borisenko, S.V. Gaponenko, V.S. Gurin, C.H. Kam / World Scientific, Singapore, 2015. –P.233-235.
  25. A. Plyushch, J. Macutkevic, P. Kuzhir, J. Banys, Dz. Bychanok, S. Maksimenko, A. Cataldo, F. Micciulla and S. Bellucci Redistribution effects in graphene nano platelets / epoxy resin composite FM&NT-2015 Functional Materials and Nanotechnologies October 5th - 8th 2015

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26. Redistribution effects in graphene nano platelets / epoxy resin composite A. Plyushch, J. Macutkevic, P. Kuzhir, J. Banys, Dz. Bychanok, S. Maksimenko, A. Cataldo, F. Miciulla and S. Bellucci, **FM&NT-2015 | October 5<sup>th</sup> - 8<sup>th</sup>, Vilnius, Lithuania**
27. Electromagnetic properties of GNP/epoxy composites in wide temperature range. A. Plyushch, J. Macutkevic, P. Kuzhir, J. Banys, Dz. Bychanok, S. Maksimenko, A. Cataldo, F. Miciulla and S. Bellucci, **Nanomeeting 2015, May 26 - 29, Minsk, Belarus**
28. Graphene nano platelets / epoxy composites in wide frequency and temperature range, A. Plyushch, J. Macutkevic, P. Kuzhir, J. Banys, Dz. Bychanok, S. Maksimenko, A. Cataldo, F. Miciulla and S. Bellucci, **FANEM 2015, May 25-27, Minsk, Belarus**
29. Dielectric and shielding properties of Ni@C/ polydimethylsiloxane composites, A. Plyushch, J. Macutkevič, J. Banys, P.Kuzhir, O. Shenderova, **LUP-2016, September 5<sup>th</sup> - 9<sup>th</sup>, Palanga, Lithuania.**
30. Phosphate ceramics – carbon nanotubes composites, Artyom Plyushch , Jan Macutkevič, Polina Kuzhir, Aliaksei Sokal, Konstantin Lapko, Jūras Banys, **SIWAN'7, October 5<sup>th</sup> - 9<sup>th</sup>, Szeged, Hungary.**