

CURRICULUM VITAE

PERSONAL DATA:

Name: Polina P. Kuzhir
Date of Birth 16th October, 1969
Place of Birth Minsk , Belarus, USSR
Nationality: Belarus
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Business address: Belarusian State University, Research Institute for Nuclear Problems, 11 Bobruiskaya Str., app. 316 220030 Minsk, Belarus
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EDUCATION:

- Ph.D. in Physics (Candidate of Science in Phys. and Math.), 1996, Inst. of Physics, Belarus Academy of Science, Minsk, Belarus. Thesis title: “Analysis of the observables in the processes of (anti)neutrino scattering on polarized nucleon target”
- M. Sc. in Physics, June 1991, Belarus State University, Physical Department, Minsk, Belarus. Subject of examination: general Physics, Theoretical Physics, High Energy and Particle Physics

EXPERIENCE:

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

09/1991 – 09/1992 (Junior Researcher).

National Center of Particle and High Energy Physics, Belarus State University, Minsk, Belarus

10/1992 – 08/2000 (Junior Researcher, Researcher, Senior Researcher)

Belarus State University, Minsk, Belarus

06/1993 – 12/1996 (PhD Student).

09/2000 – 03/2006 (Head of Research Development and Coordination Department, General Directorate of Sciences)

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

04/2005 – 04/2006 (Senior Researcher, Part time job)

04/2006 – 12/2012 (Senior Researcher)

01/2013 – **Present** (Head of NanoElectroMagnetics Lab)

Specialization (*specify*)

- main field** electromagnetic waves interaction with condensed matter
- other fields** quantum field theory, high energy and particle physics
- current research interest**

Electromagnetic materials for microwave and THz: The theoretical and experimental research of electromagnetic response of graphene, graphene/polymer sandwich structures, ultrathin carbonaceous films, carbon nanotubes, nanocarbon based composites, carbon porous structures (foams, periodic cellular architectures, aero- and herogels) in wide frequency range (from radio frequency to THz).

Materials and structure for high current electronics (explosive electron emission cathodes on the basis of carbon nanotubes arrays, graphene-like materials, etc)

Nanocarbon and graphene based nanoelectronic devices: monomolecular light emitter in THz frequency range (nano-sized traveling wave tube, backward wave tube, nano-scaled free electron laser).

Honours, Awards, Fellowships, Membership of Professional Societies

- **Diploma of Ministry of Education** of the Republic of Belarus, 2005
- **Honour Diploma of Belarusian state University**, 2007
- **Honour Diploma of National Academy of Science of Belarus**, 2011
- **Belarus State University Award named by Academician A.N.Sevchenko for the work "Electromagnetics of nanostructures"** (2011)
- **Belarus State University, honored worker**, 2016

INTERNATIONAL RESEARCH GRANTS (on current research activity):

- **Development of Electromagnetic Wave Absorbing Coatings based on Carbon Onions** from the NATO Science for Peace Program, 2005-2008. Ref. number: SfP-981051, Project co-ordinators: O. Shenderova (Raleigh, USA), V.L. Kuznetsov (Novosibirsk, Russia), Ph. Lambin (Namur, Belgium), I. Larionova (Dzerzhinsk, Russia), S. Maksimenko (Minsk, Belarus), A. Okotrub (Novosibirsk, Russia)
- **Electromagnetic response properties of carbon onions and carbon onion-based composites**, from the INTAS, 2006-2008, Ref. Nr 06-1000013-9225, Project coordinator: Prof. Ph. Lambin (Namur, Belgium)
- **Terahertz applications of carbon nanotubes**, Bilateral Cooperation in Education and Research Project ID:BMBF 1292, Technische Universität Berlin, Project coordinator: Prof. C. Thomsen (TUB)
- **Nanocarbon based composite materials for electromagnetic applications**, from ISTC project B-1708, 2009-2012, Project manager S.A.Maksimenko, participants: A. Gusinskii (BSUIR, Belarus) I. Larionova (Bryansk, Russia), V.L. Kuznetsov (Novosibirsk, Russia), A. Okotrub (Novosibirsk, Russia); collaborators: O. Shenderova (Raleigh, USA), Ph. Lambin (Namur, Belgium)
- **Nano carbon based components and materials for high frequency electronics**, EU FP7 CACOMEL project FP7-247007, Call ID "FP7-PEOPLE-2009-IRSES", 2010-2013, Principal Researcher: Prof. Ch. Thomsen (Institut fuer Festkoerperphysik, TUB, Berlin, Germany), team leaders S. Maksimenko, Y. Svirko (University of Joensuu, Finland), Yu.N. Shunin (University of Latvia, Institute of Solid State Physics), E. Obrazcova (A.M. Prokhorov General Physics Institute of RAS), P. Dyachkov (Kurnakov Institute of General and Inorganic Chemistry, RAS) G. Miano (Università degli Studi di Napoli Federico II, Italy)
- **Carbon nanotubes based composite materials for electromagnetic shielding in microwaves**, Collaborative Linkage Grant under project PST.CLG. 983910, 2010-2011, Principal Researchers: J. Banis, (Vilnius, Lithuania) and S.A. Maksimenko.
- **Institutional Development of Applied Nanoelectromagnetics: Belarus in ERA Widening**, EU FP7 BY-NanoERA project FP7-266529, Call ID FP7-INCO-2010-6, 2010-2013. Coordinator Prof. S. Maksimenko, partners: A. Hoffmann (Institut fuer Festkoerperphysik, TUB, Berlin, Germany); Central Laboratory of Physico-Chemical Mechanics, Bulgarian Academy of Sciences, Sofia (Bulgaria); Frascati National Laboratory, National Institute of Nuclear Physics, Frascati (Italy), Institute of Electronic Structure and Laser (IESL), Heraklion, Crete (Greece), Belarusian Institute of System Analysis and Information Support of Scientific and Technical Sphere (Belarus); Science & Technology Park "Metolit" at Belarusian National Technical University (Belarus)
- **Fundamental and Applied Electromagnetics of Nano-Carbons**, EU FP7 project FP7- 318617 FAEMCAR, Call ID FP7-PEOPLE-2012-IRSES, 2012-2017, Principal Researcher: **Ph. Lambin** (Facultes Universitaires Notre-Dame de la paix de Namur, Belgium), **team leaders:** Y. Banis (Vilniaus Universitetas, Lithuania), S. Bellucci (Istituto Nazionale di Fisica Nucleare, Frascati, Italia), L. P. Biró (Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary), L.A. Chernozatonskii (Institute for Biochemical Physics RAS, Moscow, Russia), G. I. Dovbeshko (Institute of Physics, NASU, Kiev, Ukraine), P. Kuzhir (INP BSU).

- **Carbon-nanotube-based terahertz-to-optics rectenna**, EU FP7 project FP7-612285 CANTOR, Call ID FP7-PEOPLE-2013-IRSES, 2013-2017, Principal Researcher: M. Portnoi (University of Exeter, UK), team leaders S. Maksimenko (INP BSU), G. Slepyan (Tel Aviv University, Israel)
- **Nano-Thin and Micro-Sized Carbons: Toward Electromagnetic Compatibility Application**, project FP7-610875 NAMICEMC, Call ID FP7-PEOPLE-2013-IRSES, 2013-2017, Principal Researcher: A. Celzard (ENSTIB, Universite de Lorraine, Epinal, France), team leaders: S. Bellucci (Istituto Nazionale di Fisica Nucleare, Frascati, Italia), P. Kuzhir (INP BSU).
- **GRAPHENE FLAGSHIP** EU FP7 project FP7- 604391, work package 4 High frequency electronics.
- **EU Project "GRAPHENE Core 1"** - n.696656 –FETFLAGSHIP workpackage 7
- **Collective Excitations in Advanced Nanostructures** Project ID 644076 Call H2020-MSCA-RISE-2014 Programme H2020 CoExAN
- **Multifunctional Graphene-based Nanocomposites with Robust Electromagnetic and Thermal Properties for 3D-printing Application**, H2020 RISE 734164 Graphene 3D
- **Erasmus+** Programme, Inter-institutional agreement between Namur University, Belgium and Belarusian State University 2016-2018 (Researchers in charge: Prof. Ph.Lambin and Dr. P.Kuzhir)

INVITED TALK:

1. K.G. Batrakov, P.P. Kuzhir, S.A. Maksimenko, Generation and propagation of electromagnetic waves in carbon nanotubes: new proposition for optoelectronics and bio-medical applications (invited), Int. Conf. on nano-materials for electronics ICNME-2006, Centre For Materials for Electronics Technology (C-MET), Pune INDIA, November 27-29, 2006
2. K.G.Batrakov, P.P.Kuzhir S.A.Maksimenko, Nano-sized electromagnetic source on the principles of Free Electron Lasers, IX International School-Seminar “The Actual Problems of Microworld Physics”, Gomel, Belarus, July 23-August 3, 2007
3. P.P. Kuzhir, S.A. Maksimenko, V.L. Kuznetsov, I. Mazov, S.I. Moseenkov, A. Romanenko, O. Shenderova, Ph. Lambin, Nanocarbon in microwaves: electromagnetic properties and applications, X International School-Seminar “The Actual Problems of Microworld Physics”, Gomel, Belarus, July 15 - 26, 2009
4. O. Shenderova, V. Kuznetsov, P. Kuzhir, S. Maksimenko, Ph. Lambin, Electromagnetic Radiation Shielding Material based on Nanocarbons, Converging Technologies For 21st Century Security : Royal College of Physicians, London, UK, 25th November, 2009
5. S. Maksimenko, G. Slepyan, P.Kuzhir, K. Batrakov, A. Nemeletsev, M. Shuba, Terahertz and microwave applications of carbon nanotube: waveguide, antenna, traveling wave tube, composites, etc. FP7 NMP/INCO Brokerage Event, Warsaw, Poland, 17-18 September 2009
6. P.P. Kuzhir, S.A. Maksimenko, V.L. Kuznetsov, O. Shenderova, Ph. Lambin, Nanocarbon-based polymer composites in electromagnetic applications (invited), Second International Conference on Polymer Processing and Characterization (ICPPC – 2010), January 15-17, 2010, Kottayam, Kerala, India, <http://www.processing.macromol.in>
7. S. A. Maksimenko, G. Ya. Slepyan, M. V. Shuba, P.P. Kuzhir, A. Lakhtakia, Electromagnetic response of carbon nanotube-based composite materials, International Workshop "Nanocarbon Photonics and Optoelectronics", August 2010, Finland <http://www.joensuu.fi/fysiikka/npo2010/>
8. S.Maksimenko, P.Kuzhir, G.Slepyan, V.Kuznetsov, O.Shenderova, A.Okotrub L.G. Bulusheva, J.Macutkevic, Ph.Lambin, Carbon onions for electromagnetic applications, **2010 International Symposium on Electromagnetic Theory, EMTS 2010** Berlin, August 16-19 2010 <http://www.cem.tf.uni-kiel.de/emts2010/>
9. S.Maksimenko, P.Kuzhir, G.Slepyan, V.Kuznetsov, O.Shenderova, A.Okotrub L.G. Bulusheva, J.Macutkevic, Ph.Lambin, Carbon onions for electromagnetic applications, **2010 International Symposium on Electromagnetic Theory, EMTS 2010** Berlin, August 16-19 2010 <http://www.cem.tf.uni-kiel.de/emts2010/>
10. M.V. Shuba, A.G. Paddubskaya, P.P. Kuzhir, S.A. Maksimenko, G.Y. Slepyan, V.K. Ksenevich, P. Buka, D. Seliuta, I. Kasalynas, J. Macutkevic, G. Valusis, C. Thomsen, A. Lakhtakia, (Invited talk) Carbon nanotube antenna: theory and experimental detection in thin composite films, **3rd International**

Workshop NPO2012 Nanocarbon Photonics and Optoelectronics, 29 July –3 August, 2012, Holiday Centre “Huhmari”, Polvijärvi, Finland, <http://npo.fi>

11. S.A. Maksimenko, G. Y. Slepian, M. V. Shuba, P.P. Kuzhir, ELECTROMAGNETIC RESPONSE OF CARBON NANOTUBES AND NANOTUBE-BASED COMPOSITES IN TERAHERTZ RANGE, *4th International Workshop NPO2012 Nanocarbon Photonics and Optoelectronics, 28 July –1 August, 2014, Holiday Centre “Huhmari”, Polvijärvi, Finland, <http://npo.fi>*
12. P. Kuzhir, R. Kotsilkova, S. Bellucci, S. Maksimenko “Polymer composites filled with nanocarbon: electromagnetic applications”, Baltic Polymer Symposium 2014, plenary lecture (September 2014)
13. C1-I-01 S. Maksimenko, G. Slepian, M. Shuba, P. Kuzhir THz response of CNT thin films: evidence of nanotube antenna, 17th International Symposium on the Physics of Semiconductors and Applications (ISPSA-2014), Jeju Island, Korea December 7-11, 2014 (invited)
14. C1-I-02 K. Batrakov, P. Kuzhir, S. Maksimenko, A. Paddubskaya, S. Voronovich, Ph Lambin, T. Kaplas & Yu Svirko, Graphene/PMMA sandwiches for microwave applications, 17th International Symposium on the Physics of Semiconductors and Applications (ISPSA-2014), Jeju Island, Korea December 7-11, 2014 (invited)
15. Батраков К.Г., Кузир П.П., Максименко С.А., Поддубская О.Г., Волынец Н.В., Каплас Т., Свирко Ю.П., Лобет М., Рикенжер Н., Ламбин Ф., СЭНДВИЧИ ПОЛИМЕР-ГРАФЕН В СВЧ: ВЛИЯНИЯ КАЧЕСТВА CVD ГРАФЕНА НА СПОСОБНОСТЬ К ЭЛЕКТРОМАГНИТНОЙ ЭКРАНИРОВКЕ Первая российская конференция «ГРАФЕН: МОЛЕКУЛА И 2D КРИСТАЛЛ», Новосибирск 8-12 сентября 2015
16. БАТРАКОВ К.Г. , КУЖИР П.П. , МАКСИМЕНКО С.А. , PH. LAMBIN , KAPLAS Т. , SVIRKO YU. ПОГЛОЩЕНИЕ ЭЛЕКТРОМАГНИТНОГО ИЗЛУЧЕНИЯ В СВЕРХТОНИХ ГРАФЕНОВЫХ ПЛЕНКАХ: ТЕОРИЯ И ЭКСПЕРИМЕНТ, *Научная школа для молодых ученых: Углеродные нанотрубки и графен - новые горизонты*, 30 ноября - 4 декабря, 2015 Москва, Российская Федерация
17. D. Bychanok, G. Gorokhov, A. Plyushch, V. Skadorov, S.Maksimenko, P. Kuzhir, J. Macutkevic, A. Ortona, L. Ferrari and E. Rezaei , V. Fierro A. Celzard, Carbon periodic cellular architectures at high frequencies: metamaterial and photonic crystal, Fundamental and Applied NanoElectroMagnetics, Minsk, Belarus, May 25-27 2015
18. S. Maksimenko, P. Kuzhir, K. Batrakov, S. Voronovich, T. Kaplas, Yu. Svirko, Enhanced Electromagnetic Properties of Ultrathin Pyrolytic Carbon Films in Ka-Band, **2015 International Conference on Electromagnetics in Advanced Applications** - ICEAA '15 - 17 th Edition, Turin, 7-11 September 2015
19. S. A. Maksimenko, K. G. Batrakov, P. P. Kuzhir, M. V. Shuba, G. Y. Slepian, Electromagnetic effects in nanocarbon: modelling and device applications, XIV International Conference on Quantum Optics and Quantum Information, October 27–30, 2015, Minsk, BELARUS
20. Polina Kuzhir, Konstantin Batrakov, Sergey Maksimenko, Philippe Lambin, Tommi Kaplas, Yuri Svirko, Absorption of electromagnetic radiation in ultra-thin graphene films: theory and experiment, School for Young Researchers “Carbon nanotubes and graphene; new horizons”, Moscow, Prokhorov Institute of general Physics, December 1-4, 2015
21. P. Kuzhir, K. Batrakov, S. Maksimenko, A. Paddubskaya, Tommi Kaplas, Yuri Svirko, Philippe Lambin, Graphene based *microwave – THz* devices: main principles, tutorial lecture (the invited talk) School for Young Researchers “Nanocarbon for Optics and Electronics”, Kaliningrad (Russia) 24 - 29 July, 2016, The Emmanuel Kant Baltic Federal University
22. Polina Kuzhir, Konstantin Batrakov, Alesia Paddubskaya, Sergey Maksimenko, Rumiana Kotsilkova, Tommi Kaplas, Yuri Svirko, Philippe Lambin, Graphene heterostructures: peculiarities of microwave and THz response, The Fifth International Workshop on Nanocarbon Photonics and Optoelectronics will be held from 1 until 5 August, 2016 at the Holiday Club Saimaa, Imatra, South Karelia, Finland.

PUBLICATIONS

Books:

1. S. A. Maksimenko, G. Ya. Slepian, K. G. Batrakov, A.A. Khrushchinsky, P.P. Kuzhir, A. M. Nemilentsau, and M. V. Shuba, Electromagnetic waves in carbon nanostructures, in: "**Carbon Nanotubes**

and Related Structures". Editors: V. Blank and B. Kulnitskiy, Research Signpost Publisher (2008), pp. 147-187

2. J. Macutkevici, D. Seliuta, G. Valusis, J. Banys, P. Kuzhir, S. Maksimenko, V. Kuznetsov, S. Moseenkov, O. Shenderova and Ph. Lambin, Dielectric Relaxation of Onion-Like Carbon Based Polymers Composites, in: **Peter J. Graham and Catherine M. Neely (Eds), Polymer relaxation**, Nova Science Publisher Inc, 2012, pp. 107-136 ISBN 9781614703815 https://www.novapublishers.com/catalog/product_info.php?products_id=24866

Full list of publications, since 2007 (on nanoscience)

As a member of ATLAS collaboration CERN I have a number of publications on high energy physics

1. P. P. Kuzhir, K.G. Batrakov, S.A. Maksimenko, Generation and propagation of electromagnetic waves in carbon nanotubes: new proposition for optoelectronics and bio-medical applications, **Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry**, **37** (5), 341 – 346 (2007).
2. R Langlet, Ph Lambin, A Mayer, S A Maksimenko and P P Kuzhir, Dipole polarizability of onion-like carbons and electromagnetic properties of their composites, **Nanotechnology**, **19** (11) 115706 (8pp) (2008)
3. K.G. Batrakov, P.P. Kuzhir, and S.A. Maksimenko, Toward the nano-FEL: undulator and Cherenkov mechanisms of light emission in carbon nanotubes, **Physica E** **40** (5), 1065-1068 (2008).
4. K. G. Batrakov, P. P. Kuzhir and S. A. Maksimenko, Stimulated emission of electron beam in nanotube bundles, **Physica E**, **40** (7) 2370-2374 (2008).
5. J. Macutkevici, R. Adomavicius, A. Krotkus, D. Seliuta, G. Valusis, S. Maksimenko, P. Kuzhir, K. Batrakov, V. Kuznetsov, S. Moseenkov, O. Shenderova, A.V. Okotrub, R. Langlet and Ph. Lambin, Terahertz Probing of Onion-Like Carbon-PMMA Composite Films, **Diamond and Related Materials** **17**, 1608-1612 (2008).
6. V. Kuznetsov, S. Moseenkov, A. Ischenko, A. Romanenko, T. Buryakov, O. Anikeeva, S. Maksimenko, P. Kuzhir, D. Bychanok, A. Gusinski, O. Ruhavets, O. Shenderova and P. Lambin, Controllable electromagnetic response of onion-like carbon based materials, **phys. stat. sol. (b)** **245**(10), 2051–2054 (2008) / DOI 10.1002/pssb.2008
7. K. G. Batrakov, S.A. Maksimenko, P.P. Kuzhir and C. Thomsen, Carbon nanotube as a Cherenkov-type light emitter and free electron laser, **Phys. Rev. B** **79**, 125408 (2009) [arXiv:0807.3091](https://arxiv.org/abs/0807.3091)[cond-mat.mes-hall]
8. F. Moreau, R. Langlet, Ph. Lambin, P.P. Kuzhir, D.S. Bychanok, S.A. Maksimenko, Onion-like carbon based composite films: theoretical modeling of electromagnetic response, **Solid State Sciences**, **11** (2009) 1752–1756
9. J. Macutkevici, D. Seliuta, G. Valusis, J. Banys, P. Kuzhir S. Maksimenko, V. Kuznetsov, S. Moseenkov, O. Shenderova, Ph. Lambin, Broadband dielectric spectroscopy of PMMA nanocomposites containing onion-like carbon, **Nanoelectronics and Optoelectronics**, v.4 (2009) 261-266
10. D.S. Bychanok, S.I. Moseenkov, V.L. Kuznetsov, P.P. Kuzhir, S.A. Maksimenko, O.V. Ruhavets, A.V. Gusinski, O. Shenderova and Ph. Lambin, Onion Like Carbon In Microwaves: Electromagnetic Absorption Bands And Percolation Effect, **Nanoelectronics and Optoelectronics**, v.4 (2009) 257-260
11. P.P. Kuzhir, D.S. Bychanok, S.A. Maksimenko, A.V. Gusinski, O.V. Ruhavets, V.L. Kuznetsov, S.I. Moseenkov, C. Jones, O. Shenderova, Ph. Lambin, Onion-like carbon based polymer composite films in microwaves, **Solid State Sciences**, **11** (2009) 1762–1767 doi:10.1016/j.solidstatedsciences.2008.12.003
12. Macutkevici, J., Seliuta, D., Valusis, G., Banys, J., Kuzhir, P., Maksimenko, S., Kuznetsov, V., Moseenkov, S., Shenderova, O. and Lambin, Ph.(2009) 'Influence of Humidity on Dielectric Properties of PMMA Nanocomposites Containing Onion-Like Carbon' **Ferroelectrics** **391** (2009) 131 — 138, DOI: 10.1080/00150190903004601
13. P. Kuzhir, S. Maksimenko, D. Bychanok, V. Kuznetsov, S. Moseenkov, I. Mazov, O. Shenderova and Ph. Lambin, Nano-scaled onion-like carbon: prospective material for microwave coatings. **Metamaterials** **3** (2009) 148–156

14. J. Macutkevic, D. Seliuta, G. Valusis, J. Banys, P. Kuzhir, S. Maksimenko, V. Kuznetsov, S. Moseenkov, O. Shenderova and Ph. Lambin, Dielectric properties of onion-like carbon based polymer films: experiment and modeling, **Solid State Sciences**, 11 (2009) 1828–1832
15. V. Kuznetsov, I. Mazov, S. Moseenkov, A. Usoltseva, A. Romanenko, T. Buryakov, P. Kuzhir, S. Maksimenko, Electromagnetic shielding properties of MWNT/PMMA composites in Ka-band, **Phys. Stat. Sol. B** 246, No. 11–12, 2662–2666 (2009) / DOI 10.1002/pssb.200982294
16. Jan Macutkevic, Dalius Seliuta, Gintaras Valusis, Juras Banys, Polina Kuzhir, Sergey Maksimenko, Vladimir Kuznetsov, Sergey Moseenkov, Anna Usolseva, Ilya Mazov, Arcady Ischenko, Philippe Lambin, Dielectric properties of MWCNT based polymer composites close and below percolation threshold, **physica status solidi (c)** 6, No. 12, 2814–2816 (2009) / DOI 10.1002/pssc.200982531
17. J. Macutkevic, P. Kuzhir, D. Seliuta, G. Valusis, J. Banys, A. Paddubskaya, D. Bychanok, G. Slepian, S. Maksimenko, V. Kuznetsov, S. Moseenkov, O. Shenderova, A. Mayer and Ph. Lambin, Dielectric properties of novel high absorbing onion-like-carbon based polymer composite, **Diamond and Related Materials** 19(1) 91–99 (2010); doi:10.1016/j.diamond.2009.11.011 [BMBF 08/001, ISTC, CACOMEL]
18. K. G. Batrakov, P. P. Kuzhir, S. A. Maksimenko, Cherenkov synchronism: non-relativistic electron beam in multi-walled nanotube and multi-layer graphene, **Physica B: Condensed Matter**, 405(14) 3050–3053 (2010), doi:10.1016/j.physb.2010.01.047 [TerACaN, CACOMEL, BMBF, F08R-009]
19. K.G. Batrakov, O.V. Kibis, P.P. Kuzhir, S.A. Maksimenko, M. Rosenau da Costa, M.E. Portnoi, Mechanisms of terahertz emission from carbon nanotubes, **Physica B: Condensed Matter**, 405(14), 3054–3056 (2010) doi:10.1016/j.physb.2010.01.048 [TerACaN, CACOMEL, F08R-009]
20. Batrakov, K.G., Kibis, O.V., Kuzhir, P.P., Da Costa, M.R., Portnoid, M.E., Erratum: Terahertz processes in carbon nanotubes (**Journal of Nanophotonics** (2010) 4 (041665)) (2010) *Journal of Nanophotonics* 4 (1) doi: 10.1117/1.3452318
21. Batrakov, K.G., Kibis, O.V., Kuzhir, P.P., Rosenau Da Costa, M., Portnoi, M.E. Terahertz processes in carbon nanotubes, (2010) **Journal of Nanophotonics** 4 (1) Cited 12 times. doi: 10.1117/1.3436585
22. D. Seliuta, I. Kašalynas, J. Macutkevic, G. Valušis, M.V. Shuba, P.P. Kuzhir, G.Y. Slepian, S.A. Maksimenko, V. Ksenevich, V. Samuilov, and Q. Lu, Terahertz sensing with carbon nanotube layers coated on silica fibers: Carrier transport versus nanoantenna effects, **Appl. Phys. Lett.** 97, 073116 (2010) doi:10.1063/1.3478009 [NATO, ISTC]
23. A M Nemilentsau, M V Shuba, P N D'yachkov, G Ya Slepian, P P Kuzhir and S A Maksimenko, Electromagnetic response of the composites containing chemically modified carbon nanotubes, **J. Phys.: Conf. Ser.** 248, 012003 (1-6) (2010) [BMBF 08/001, CACOMEL, ISTC, F09M-071].
24. A. M. Nemilentsau, M. V. Shuba, G. Ya. Slepian, P. P. Kuzhir, S. A. Maksimenko, P. N. D'yachkov, A. Lakhtakia, Substitutional doping of carbon nanotubes to control their electromagnetic characteristics, **Phys. Rev. B** 82, 235424 (2010) [10 pages] [F09M-071, F10R-002, F10CO-020, TERACAN, BY-NanoERA, ISTC]
25. 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 [NATO, ISTC]
26. P. Kuzhir, A. Paddubskaya, D. Bychanok, G. Slepian, S. Maksimenko, J. Macutkevic, D. Seliuta, G. Valusis, J. Banys, V. Kuznetsov, S. Moseenkov, O. Shenderova and Ph. Lambin, Electromagnetic response of polymer composites with quasi-spherical nanocarbon inclusions: theory below the percolation threshold, **Journal of Polymer Engineering**, 31, 167–173 (2011) DOI 10.1515/POLYENG.2011.037 [ISTC, BMBF, CACOMEL, NATO]
27. 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

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