

CURRICULUM VITAE

PERSONAL DATA:

Name: Maksimenko Sergey Afanasievich
Date of Birth 13th August, 1954
Place of Birth Krivichi, Minsk region, Belarus, USSR
Nationality: Belarus
Marital Status: Married
Business address: Belarus State University, Institute for Nuclear Problems,
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EDUCATION:

- D. Sc. in Physics, (Doctor of Science in Phys. and Math.), 1996, Inst. of Physics, Belarus Academy of Science, Minsk, Belarus. Thesis title: "Propagation of waves and wave packets in periodical and dispersive media".
- Ph.D. in Physics (Candidate of Science in Phys. and Math.), 1988, Belarus State University, Minsk, Belarus. Thesis title: "Polarization and time-domain effects under the interaction of radiation from x-ray spectral range with anisotropic and dispersive media".
- M. Sc. in Physics, June 1976, Belarus State University, Physical Department, Minsk, Belarus. Subject of examination: general physics, heat- and mass-transfer.

EXPERIENCE:

Institute of Heat- and Mass Transfer, Belarus Ac. of Sci., Minsk, Belarus

08/1976 – 09/1977 (Engineer-Researcher).

Belarus State University, Minsk, Belarus

01/1977 – 09/1980 (PhD Student).

06/2000 – 02/2005 (Deputy Vice-Rector - Chief of General Directorate of Sciences)

09/2006 – **Present** (Professor at the Solid State Physics department)

Institute of Applied Physical Problems, Belarus State University, Minsk, Belarus

10/1980 – 07/1986 (Junior Researcher).

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

08/1986 – 01/1992 (Researcher, Major Researcher).

02/1992 – 12/2012 (Head of Laboratory).

03/1997 – 06/2000 (Deputy Director).

01/2013 – **Present** (*Director*)

Max-Born Institut für Nichtlineare Optik und Kurzzeitspektroskopie, Berlin, Germany

1998 – 2004 Visiting Scientist, repetitively

Institut für Festkörperphysik, Technische Universität Berlin, Berlin, Germany

1999 – 2014 Visiting Scientist, repetitively

Eindhoven University of Technology, Department of Applied Physics, Eindhoven, The Netherlands

2005 -2014 Visiting Scientist, repetitively

Facultés Universitaires Notre-Dame de la Paix, Laboratoire de Physique du Solide, Namur, Belgium

2006 –2014 ,Visiting Scientist, repetitively

Frascati National Laboratory , National Institute of Nuclear Physics, Frascati, Italy

2008– 2012, Visiting Scientist, repetitively

LECTURE COURSE:

Physics of nanostructured materials, Physics of Nanostructures, Physical Department, BSU

INTERNATIONAL RESEARCH GRANTS:

- **Diffraction, Localization and Dynamical Stochasticity in Nonlinear Media and Systems** from the International Science Foundation, Contracts No U9Y000 and U9Y200, 1994-1996, Principal Researcher: Prof. F. G. Bass (Kharkov, Ukraine).
- **Quantum Dot Laser** from the INTAS, 1997-2000. Reference number: INTAS-96-0467, Project co-ordinator: Prof. D. Bimberg, (Berlin, Germany).
- **Light Emitting Devices Based on GaAsN-GaN Double Heterostructures** from the NATO Science for Peace Program, 1998-2004. Ref. number: SfP-972614, Project co-ordinators: Acad. Z. Alferov (St.-Petersburg, Russia), Dr. A. Hoffman, (Berlin, Germany).
- **New Methods and Approaches for Femtosecond Lasers** within the Framework of bilateral RB-FRG scientific-technical cooperation (BMBF), project number WEI-001-98, Project leaders: Prof. J. Herrmann (MBI, Berlin, Germany), V. Kalosha (INP, Minsk, Belarus).
- **Dynamics of ultra-short soliton-like pulses in resonant dispersive media** from the INTAS, 1998-2001. Reference number: INTAS-97-2018, Project co-ordinator: Prof. J.Herrmann, (Berlin, Germany)
- **Nonlinear optical and transport effects in carbon nanotubes** within the Framework of bilateral RB-FRG scientific-technical cooperation (BMBF), project number BEL-01-01, Project leaders: Prof. J. Herrmann (MBI, Berlin, Germany), S.A. Maksimenko (INP, Minsk, Belarus), 2001-2004.
- **Electromagnetic and transport properties of solid state nanostructures with electron-photon and electron-phonon resonant states**, from the Russian-Belarus Joint Call of Foundations for Fundamental Research, 2002-2004, F01-R-047 Principal Researcher: G.Ya.Slepyan.
- **Quantum dot in a microcavity: Local field effects in the strong coupling regime**, from the NATO Science Programme, Cooperative Science And Technology Sub-Programme, Collaborative Linkage Grant under project PST.CLG.980375, 2004-2005, Principal Researchers: Dr. A. Hoffmann, (Berlin, Germany) and S.A. Maksimenko.
- **Highly Oriented Arrays of Carbon Nanotubes: Synthesis, Characterization and Physical Properties**, from the INTAS, 2004-2006. Reference number: 03-50-4409, Project coordinator: Prof. László Forró, (Lausanne, Switzerland)
- **Nonlinear optical properties of carbon nanotube composites**, World Federation of Scientists, National Scholarship Programme in the frame of the topic “Science and Technologies for Developing Countries”, 2004. Grant holder A. Nemilentsau under supervision of S.A. Maksimenko
- **Electrodynamical properties of a semiconductor quantum dot: The Influence of Local fields**, from the INTAS Young Scientist Fellowship, 2005-2007, Ref. Nr 04-83-3607, grant holder: A.V.Magyarov, supervisors Dr. A. Hoffmann, (Berlin, Germany) and S.A. Maksimenko.
- **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)

- **Endohedral metallofullerene peapod as a vibrator nanoantenna in the optical range: method of excitation and spectral-angular characteristics**, from the INTAS Young Scientist Fellowship, 2006-2008, Ref. Nr 05-109-4595, grant holder: A.Nemilentsau, supervisors Prof. E. Campbell, (Gothenburg, Sweden) and S.A. Maksimenko.
- **Quantum optics of excitonic composites**, from Deutsche Forschungsgemeinschaft (DFG). Host institution: Institut fuer Festkoerperphysik, Technische Universitat Berlin, Berlin, Germany, Dr. A. Hoffmann, 2006
- **Electromagnetics of nanostructures**, from the INTAS, 2006-2008. Reference number: 05-100008-7801, Project coordinator: Dr. A. Hoffmann, Institut fuer Festkoerperphysik, Technische Universitat Berlin, Berlin, Germany
- **Electromagnetic response properties of carbon onions and carbon onion-based composites**, from the INTAS, 2006-2008, Ref. Nr 06-100013-9225, Project coordinator: Prof. Ph. Lambin (Namur, Belgium)
- **Physical response properties of carbon nanotubes arrays in strong electric and magnetic fields**, from the Joint Call CNRS (France)-Belarus Foundations for Fundamental Research, 2007-2009, F07F-013, Principal Researchers: S. Maksimenko and J. Galibert (National Laboratory of Pulsed Magnetic Fields, Toulouse, France).
- **Optical properties of carbon nanotube based composite medium**, World Federation of Scientists, National Scholarship Programme in the frame of the topic “Science and Technologies for Developing Countries”, 2008. Grant holder M. Shuba under supervision of S.A. Maksimenko
- **Terahertz applications of carbon nanotubes**, within the Framework of bilateral RB-FRG scientific-technical cooperation (IB BMBF), project number BLR 08/001, Project leaders: Prof. Ch. Thomsen (Institut fuer Festkoerperphysik, TUB, Berlin, Germany), S.A. Maksimenko (INP, Minsk, Belarus), 2008-2010.
- **Rabi waves – a new class of excitations in semiconductor nanostructures**, from Deutsche Forschungsgemeinschaft (DFG). Host institution: Institut fuer Festkoerperphysik, Technische Universitat Berlin, Berlin, Germany, Dr. A. Hoffmann, 2008
- **Terahertz applications of carbon-based nanostructures**, EU FP7 TerACaN project FP7-230778, 2009-2013, Principal Researcher: M. Portnoi (Univer Exeter, UK), team leaders S. Maksimenko, O. Kibis (Novosibirsk, NSTU), I. Luk'yanchuk (Amiens University, France).
- **Interaction of quantum dot-based metamaterials with electromagnetic radiation**, from the Belarus Foundations for Fundamental Research, International Collaboration Call, project F09MC-009, 2009-2011, Principal Researchers: S. Maksimenko and Dr. A. Hoffmann (Institut fuer Festkoerperphysik, Technische Universitat Berlin, Berlin, Germany).
- **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 (Biysk, 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”, 2010-2014, Coordinator: Prof. Ch. Thomsen (Institut fuer Festkoerperphysik, TUB, Berlin, Germany), partners: S. Maksimenko, Y. Svirko (University of Eastern Finland, 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 CBP.EAP.CLG 983910, 2010-2011, Principal Researchers: J. Banis, (Vilnius, Lithuania) and S.A. Maksimenko.

- **Electromagnetic waves in carbon nanotubes: absorption mechanisms and instability**, from Deutsche Forschungsgemeinschaft (DFG) Ref. no TH 662/16-1. Host institution: Institut fuer Festkoerperphysik, Technische Universität Berlin, Berlin, Germany, Prof. Ch. Thomsen, 2010
- **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. Slepian (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, Université de Lorraine, Epinal, France), team leaders: S. Bellucci (Istituto Nazionale di Fisica Nucleare, Frascati, Italia), P. Kuzhir (INP BSU).
- **Multi-layered sandwich graphene devices**, EU FP7 project FP7- 604391 GRAPHENE FLAGSHIP, team leader
- **Collective Excitations in Advanced Nanostructures, EU Horizon 2020**, Call: H2020-MSCA-RISE-2014, Proposal Number: SEP-210156718 CoExAN, senior scientist

MEMBERSHIP OF PROFESSIONAL SOCIETIES AND AWARDS

- Diploma of the Council of Ministers of the Republic of Belarus for achievements in professional work and teaching (2011)
- Belarus State University Award named by Academician A.N.Sevchenko for the work "Electromagnetics of nanostructures" (2011)
- Honored Staff Member of the Belarus State University (2010)
- SPIE Fellow (2009)
- DAAD Fellowship (2009)
- Belarus National Scholarship for Advanced Achievements in Research (2007)
- Diploma of the National Assembly of the Republic of Belarus for achievements in professional work and teaching (2001)
- Belarus Physical Society
- European Material Research Society
- SPIE-The International Society for Optical Engineering
- Societa' Italiana di Fisica
- BSU and INP academic councils member
- Supreme Certification Committee of the Republic of Belarus for academic degree adjudgment, Expert Council member
- Co-ordinator of the State Program of Basic Research “Nanotech” (2003-2005)
- Scientific Council member of the State Program of Basic Research “Nanotech” (2006-2010)
- Scientific Council member of the State Program of Basic Research “Convergentsia” (2011-2015).

OTHER RELEVANT EXPERIENCE:

- NATO Advanced Research Workshop "Fundamental and Applied NanoElectroMagnetics" FANEM'15, May 25-27, 2015, Belarusian State University, Minsk, Belarus, Co-director, <http://www.fanem.org/>
- International conference on Physics, Chemistry and Application of Nanostructures "Nanomeeting 2015", May 26-29, 2015, Minsk, Belarus, <http://www.nanomeeting.org/>, International Organizing Committee Member
- The 2nd Conference on New Advances in Condensed Matter Physics (NACMP 2015), January 31 - February 2, 2015, Shanghai, China, <http://www.scirp.org/Conference/Home.aspx?ConferenceID=78>. Technical Program Committee member.
- Fourth International Conference "Engineering of Scintillation Materials and Radiation Technologies" (ISMART 2014), 12 - 16 October 2014, Minsk, Belarusian State University, Co-Chairman
- Korea-Belarus joint symposium on physics and devices of functional nanostructures, June 17-19, 2014, Chairman
- 2nd Global Conference on Materials Science and Engineering (CMSE 2013), Hubei University of Science and Technology, Xianning, Hubei Province of China Nov. 20-22, 2013, <http://www.cmseconf.org/>, Technical Program Committee member
- International conference on Physics, Chemistry and Application of Nanostructures "Nanomeeting 2013", May 28-31, 2013, Minsk, Belarus, <http://www.nanomeeting.org/>, International Organizing Committee Member and Special Session "Nanoelectromagnetics" organizer
- International conference Nanoscience and Nanotechnology N&N13, INFN – Laboratori Nazionali di Frascati, October 1-4, 2012, Frascati, Italy, <http://www.lnf.infn.it/conference/nn2013/>
- The Referee for the Evaluation of research projects on behalf of the Italian Ministry of Education, University and Research (MEUR) <https://referee.cineca.it>, Italy
- MN 2012 program of the French National Research Agency, <https://aap.agencerecherche.fr/>, France, project reviewer
- International Conference Nanoscience And Nanotechnology 2012 (n&n2012) 1 - 4 October 2012, Frascati (Rome), Italy, <http://www.lnf.infn.it/conference/nn2012/>, see also <http://physicsworld.com/cws/event/17900>, International Advisory Committee member
- International conference "Fundamental and Applied NanoElectroMagnetics" FANEM'12, May 22-25, 2012, Belarusian State University, Minsk, Belarus, Chair, <http://www.nano.bsu.by/>
- The 5th Global Symposium on Millimeter-Waves 2012 (GSMM2012) May 27-30, 2012, Harbin, China, Technical Program Committee member , <http://www.gsmm2012.org>
- The IEEE Electrical Design of Advanced Packaging & Systems (EDAPS) Symposium, December 12-14, 2011, Hangzhou, China, International Technical Program Committee member, <http://www.edaps2011.org/>
- Second international conference Nanobiophysics: fundamental and applied aspects, 6-9 October 2011, Kiev, Ukraine, Program Committee member, <http://www.iop.kiev.ua/~nbp2011/>
- Fedorov Memorial Symposium, International Conference "Spins & Photonic Beams at Interface", September 25–26, 2011, Minsk, BELARUS, International Advisory Board Member, <http://master.basnet.by/congress2011/symposium/>
- International conference on Physics, Chemistry and Application of Nanostructures "Nanomeeting 2011", May 24-27, 2011, Minsk, Belarus, <http://www.nanomeeting.org/>, Organizing Committee Member and Special Session "Nanoelectromagnetics" organizer
- International Conference Interdisciplinary Research and Future Technologies, May 16 – 18, 2011, Minsk, Belarus, Organising Committee Member, <http://master.basnet.by/idrft2011/ru/>
- **Journal of Nanophotonics** (JNP), Associate Editor, <http://spie.org/app/Publications/>
- **ISRN Nanotechnology** (Hindawi Publishing Corporation), Editorial Board Member, <http://www.hindawi.com/isrn/nanotechnology>
- **World Journal of Condensed Matter Physics**, Editorial Board Member, <http://www.scirp.org/journal/wjcmp>
- **Advanced Electromagnetics** (AEM), ISSN: 2119-0275, **Editorial Board Member**, <http://aemjournal.org>
- 11th international conference on electromagnetic properties of Complex Materials BIAN06, September 25-30, 2006, Samarkand, Uzbekistan, international advisory committee member

- Int. Conference “Nanomodeling II”, part of SPIE’s Optics & Photonics, 13 - 17 August 2006, San Diego, California, USA, Conference Chair
- Belarus-India joint seminar on Nanoscience and Nanotechnology, December 21-23, 2005, Hyderabad, India, Coordinator from Belarus
- Int. Conference “Nanomodeling”, part of SPIE’s 49th Annual Meeting, August 2004, Denver, USA, Conference Chair
- Int. Conference “Nanotubes and Nanowires”, part of SPIE’s 48th Annual Meeting, August 2003, San Diego, USA, Conference Chair
- Synchrotron Radiation Week at the Belarus State University, January 1999, Coordinator
- 3rd International Workshop “Quantum Systems: New Trends And Methods” (Minsk, Belarus, June 1999), Organizing Committee member.
- 7th International Conference on Complex Media (Braunschweig, Germany, June 1998) Scientific Advisory Committee member.
- Independent expert evaluating proposals in the INTAS Calls 1997, 2000, 2003-2004, 2005-2006
- Paper referee for Physical Review Letter, Physical Review B, Physics Letters A, IEEE Transactions on Nanotechnology, IEEE Transactions on Antennas and Propagation, Carbon, Journal of Physics A: Mathematical and Theoretical.

CURRENT RESEARCH ACTIVITY:

Electromagnetics-of-nanostructures group exists in the Institute for Nuclear Problems since 1995. Electromagnetic response properties and electronic transport as well as linear and nonlinear optical phenomena in nanostructures are currently in the focus of the group activity. Several main topics can be singled out:

- Electromagnetic waves and signal propagation in nano-sized components and integrated nano-structured systems; electromagnetic compatibility problem on the nano scale.
- Electromagnetic response properties of composite materials with nano inclusions; electromagnetic shielding materials; nanocarbon in electromagnetic applications; nanocarbon based metamaterials.
- Ionizing radiation shielding materials; boron, boron nitride and chemically modified (doped) carbon nanotube-based composite materials;
- Nanocarbon in medical applications; far-infrared and terahertz range thermolysis of cancer cells.

A general approach is elaborated based on the interplay of present-day solid-state physics and classical methods of electrodynamics of inhomogeneous media. In particular,

- The method of effective boundary conditions has been extended to nanostructures and shown to be a universal tool for studying a wide range of problems of nanoelectrodynamics. The strong slowing down of surface waves in CNTs has been predicted, the concept of nanotubes as nanowaveguides of surface waves has been proposed (1999);
- The Mossotti-Clausius homogenization procedure for estimating the effective constitutive parameters of nanoparticle-based composite media, such as arrays of CNTs and QDs has been developed (1998, 2000).
- Polarisation-dependent splitting of the gain band in the QD array has been predicted and experimentally verified (in collaboration with A.F.Ioffe Physical-Technical Institute, St.Peterburg and Institut für Festkörperphysik, TU Berlin) (1999);
- The high-order harmonic generation by metallic CNTs exposed to an intense ultrashort pulse has been theoretically investigated. The strong nonlinearity of the laser interaction with CNTs has been predicted and confirmed experimentally (in collaboration with the Max-Born Institut fuer Nichtlineare Optik und Kurzzeitspektroskopie, Berlin) (2001-2006);
- The concept of excitonic composite has been introduced and local-field impact on quantum optics of isolated QDs and excitonic composites is under studying (1999-2007). It has been shown that the local fields induce a fine structure of the QD absorption (emission) spectrum (2002).

- The formalism of electrodynamics of lossy dispersive media has been applied to the problem of spontaneous radiation of an excited atom in the carbon nanotube demonstrating strong Parcell effect in CNTs (2002).
- The manifestation of local-field effect in Rabi oscillations of level population in QDs has been revealed (2003-2007)
- Wave scattering by an isolated finite-length CNT has been analysed. The potential of isolated CNTs as infrared and terahertz nanoantennas has been established. The analysis has been extended to CNT bundles and multi-wall CNTs. (2006 –);
- Thermal emission from CNTs has been investigated and a concept of CNT as a thermal nanoantenna has been proposed (2007);
- A concept of the CNT-based monomolecular light emitter — nanoscale traveling wave tube (TWT), backward oscillator (BWO) and free-electron laser (FEL) has been proposed. The calculations demonstrate that at the current stage of nanotechnology development the construction of CNT-based nanoFEL for terahertz frequency range is already possible (2006 –)
- Electromagnetic shielding properties of nano-carbon based composites in microwaves are currently under investigation both theoretically and experimentally, demonstrating promising high potential of OLC for the design of electromagnetic shielding materials over a broad microwave and terahertz frequency ranges (2006 –)

SCIENTIFIC PUBLICATIONS:

- >30 invited talks at international conferences
- guest editor for 3 issues of SPIE Proceedings, for 2 special sections at the Journal of Nanophotonics
- 7 contributed chapters to books
- ResearchID (ISI web of Knowledge): F-1888-2011 (h-factor **23**)
- Author ID (Scopus): 7004065644 (h-factor **23**)
- ORCID: 0000-0002-8271-0449
- The Scopus list of publication is available at <http://www.scopus.com/authid/detail.url?authorId=7004065644>

INVITED TALKS:

1. S.A. Maksimenko, G. Ya. Slepyan, Pulse propagation in linear and nonlinear chiral media. (Invited) *Int. Conference and Workshop on Electromagnetics of Complex Media Bianisotropics'97*, Glasgow, UK, June 5-7, 1997.
2. G. Ya. Slepyan, S.A. Maksimenko, A. Lakhtakia, O.M. Yevtushenko, Chiral nanostructures and nanocomposites: electronic and electromagnetic properties. (Invited.) *7th International Conference on Complex Media Bianisotropics'98*, Braunschweig, Germany, June 3-6, 1998.
3. S.A. Maksimenko, G.Ya. Slepyan, N. N. Ledentsov, V. P. Kalosha, A. Hoffmann, and D. Bimberg, Light confinement in quantum dots (Invited), *8th Intern. Symposium Nanostructures: physics and technology*, St. Petersburg, Russia, 19-23 June 2000.
4. G. Ya. Slepyan, S.A. Maksimenko, Effective boundary conditions in electrodynamics of nanostructures, (Invited.) *8th International Conference on Electromagnetics of Complex Media, Bianisotropic'2000*, Lisbon, Portugal, September 27-29, 2000.
5. S.A. Maksimenko, and G. Ya. Slepyan, Electrodynamics of nanotubes, (Invited) *203rd Meeting of the Electrochemical Society, R5 Symposium "Nanotubes, Nanoscale Materials and Molecular Devices"*, Paris, France, April 27 - May 2, 2003
6. S.A. Maksimenko, G.Ya. Slepyan, Electrodynamics of quasi-one-dimensional carbon structures: waveguiding, nonlinear response, composites (Invited), *Int. Conference Nanotubes and Nanowires, SPIE's 48th Annual Meeting*, August 2-8, 2003, San Diego, USA

7. C. Stanciu, R. Ehlich, G.Y. Slepyan, A.A. Khrutchinski, S. Maksimenko, F. Rotermund, V. Petrov, O. Steinkellner, F. Rohmund, E.E.B. Campbell, J. Herrmann, I.V. Hertel, Third-harmonic generation in carbon nanotubes: theory and experiment (Invited), *Int. Conference Ultrafast Phenomena in Semiconductors and Nanostructure Materials VIII*, 26-29 January 2004, San Jose, California, USA
8. S.A. Maksimenko, G.Ya. Slepyan, and J. Herrmann, Electromagnetic effects in nanotubes: waveguiding, nonlinear response, QED (invited), *European Materials Research Society 2004 Spring Meeting, Symposium I: Advanced Multifunctional Nanocarbon Materials and Nanosystems 04*, May 24 –28, 2004, Strasbourg, France.
9. S.A. Maksimenko, G.Ya. Slepyan, Electromagnetic Effects In Carbon Nanotubes: Waveguiding, Nonlinear Response, Spontaneous Decay Enhancement (invited), *International Conference on Electromagnetics in Advanced Applications*, September 12-16, 2005 Torino, Italia
10. S.A. Maksimenko and G.Ya. Slepyan, Electromagnetic properties of nanostructures (Plenary talk), *13th International School-Conference "Foundations & Advances in Nonlinear Science"*, September 25-28, 2006 (Minsk, Belarus)
11. 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
12. S. A. Maksimenko, Frontier Research in Byelorussia, (Plenary talk), *LATVIJAS UNIVERSITĀTES 65. KONFERENCE, Plenary session*, EU Financed Research in Latvia, Opening of 7th Framework Programme in Latvia, February 5, 2007
13. S.A. Maksimenko and G. Ya. Slepyan, Electromagnetic waves in nanostructures (invited lecturer), *School-seminar "Dynamical Chaos and its applications"*, Institute of Radio Engineering and Electronics RAS, hotel "Zvenigorodsky" (Moscow region) February 26 - March 1, 2007.
14. S.A. Maksimenko and G. Ya. Slepyan, "Electrodynamics of nanostructures: ideas, methods and perspectives". *XIV Scientific School "Nonlinear waves 2008"*, Inst. Applied Physics RAS, N. Novgorod, 1-7 March 2008, <http://www.nonlinearwaves.sci-nnov.ru>, invited lecture
15. G. Slepyan, M. Shuba, A. Nemilentsau, S. Maksimenko, Electromagnetic theory of nanodimensional antennas for terahertz, infrared and optical regimes (invited), *12-th International Conference on Mathematical Methods in Electromagnetic Theory MMET 2008*, June 29 – July 2, 2008 - Odesa, Ukraine, Programme, <http://www.mmet.org>
16. S. A. Maksimenko, G. Ya. Slepyan, Carbon Nanotube as a Terahertz Delay Line: Manifestations and Potentiality for Applications in Nanoelectromagnetics (invited talk) *The 2008 IEEE International Symposium on Antennas and Propagation and the 2008 USNC/URSI (U.S. National Committee of the International Union of Radio Science) National Radio Science meeting*, July 5-11, 2008, San Diego, California <http://www.apsursi2008.org/> .
17. S.A. Maksimenko, Electromagnetic waves in carbon nanostructures, *International Workshop "Nanocarbon Photonics and Optoelectronics"*, 3 - 9 August 2008 Holiday Centre «Huhmari», Polvijärvi, Finland <http://www.joensuu.fi/fysiikka/npo2008/> .
18. S.A. Maksimenko and G.Y. Slepyan, Electrodynamics of carbon nanotubes: principles, device applications and open questions, *XXIIIrd International Winterschool on Electronic Properties of Novel Materials*, 07-14 March, 2009, Hotel Sonnalp - Kirchberg / Tirol – Austria, www.iwepnm.org
19. S.A. Maksimenko and G.Y. Slepyan, Electromagnetic effects in carbon nanotubes: modelling and device applications, *International Symposium Nanostructures: Physics and Technology*, Minsk, Belarus 22–26, June 2009, <http://www.ioffe.ru/NANO2009/>
20. S.A. Maksimenko and G.Y. Slepyan, Terahertz-range carbon nanotube-based electromagnetic devices and systems: waveguide, antenna, interconnects, traveling wave tube, etc., *The 20th ISTC-Korea Workshop*, Korean Institute of Science and Technology (KIST), Seoul, Korea, September 15-18, 2009

21. S. A. Maksimenko and G.Y. Slepyan, Electromagnetic Effects in Carbon Nanotubes: Modelling, Potential Device Applications and Open Questions, *12th European Microwave Week 2009, 39th European Microwave Conference (EuMC), Workshop WFTH12 (EuMC) "Bridging Radio-Frequency and Nanotechnology: A New Generation of RF-Nanocomponents, Systems and NEMS"*, Nuova Fiera di Roma, Rome, Italy 28 September - 2 October 2009, <http://eumw2006.com/2009/>
22. 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>,
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