

Ryszard Buczyński - Curriculum Vitae

<i>Full name</i>	Ryszard Buczyński
<i>Sex (male or female)</i>	male
<i>Present position</i>	Assistant Professor UW, Associate Professor ITME
<i>Professional research field</i>	photonics, fiber optics, microoptics,
<i>E-mail</i>	rbuczyns@igf.fuw.edu.pl
<i>Permanent working place address:</i>	University of Warsaw (UW) Faculty of Physics Pasteura 7, 02-093 Warsaw Poland Institute of Electronic Materials Technology (ITME) Wólczyńska 133, 01-919 Warsaw, Poland phone.:+ 48 22 8353041 ext.456,



EDUCATION

- 1993 - M.Sc., Warsaw University of Technology, Faculty of Technical Physics and Applied Mathematics -
- Technical Physics
- 1997 - M.Sc., Warsaw University of Technology, Faculty of Technical Physics and Applied Mathematics -
- Applied Computer Sciences
- 1999- Ph.D., Warsaw University of Technology, Institute of Physics, Physics
- 1999 - PhD, with the highest distinction, Vrije Universiteit Brussel, Faculty of Applied Science, Belgium,
- Applied Sciences
- 2012 - D.Sc. (habilitation) University of Warsaw, Faculty of Physics, Physics

EMPLOYMENT

- 1993÷1998 – Warsaw University of Technology, PhD student
- 1995÷1999 – Vrije Universiteit Brussel, Belgium, PhD student
- 1999÷2001 – Vrije Universiteit Brussel, Belgium, postdoc researcher
- 2007-2009 – Heriot-Watt University, UK, research associate
- since 11/2001 – University of Warsaw, assistant professor
- since 05/2009 - Institute of Electronic Materials Technology, since 04/2012 associate professor, since 10/2015 Head of Department of Glass

PARTICIPATION IN FOREIGN AND INTERNATIONAL GRANTS

- 01/2015- 12/2018 MIREGAS: *Programmable multi-wavelength Mid-IR source for gas sensing*, EU-H2020-ICT-2014, Grant No. 644192, amount of funding: 3.6 mln Euro, representative of ITME, member of Steering Committee, member of Technical Management Team
- 11/2013 - /10/2017 ACTPHAST : *Access CenTer for PHotonics innovAtion Solutions and Technology support EU FP7-ICT-2013-11 Collaborative Project*, Grant No 619205, amount of funding: 8 mln Euro, representative of ITME
- 09/2010 - /03/2013 ACTMOST : *ACcess To Micro-Optics Expertise, Services and Technologies EU ICT-2009.3.7 Coordination and Support Action*, Grant No 257056, - scientific representative of ITME.
- 09/2004 – 01/2009 6FP EU NEMO – “Network of Excellence for Micro-Optics”: scientific representative of University of Warsaw (UW) , **principal investigator in UW**,workpackage leader: Mobility and Training, workpackage deputy leader: Non-conventional Diffractive Optics
- 05/2008-10/2010, *Infrared Imaging Components for Use in Automotive Safety Applications*, EU ICT-2007.3.5 STREP project, Grant No. 223989, researcher.
- 02/2001–06/2002 5 FP EU -: “MOEMS based binary microdisplay with desired field of view” #HPRI-CT-1999-00023/ #P99091-013 project within “Improving the Human Research Potential and Socio-Economic Knowledge Base”, action “Transnational Access to major Research Infrastructures”, researcher.
- 03/99-02/2001, IWT62 - ITAII 'Barco Projection Systems', Institute for Scientific and Technological Research-Flanders, *New technologies for projectors dedicated to Electronic Cinema*, Vrije Universiteit Brussel, Belgium, industrial grant, main researcher.
- 09/1999-08/2000, IWT86 - XEMEX NV, Institute for Scientific and Technological Research-Flanders, *Optoelectronic non-contact system for remote automated read-out of electrical, gas and watermeters*, Vrije Universiteit Brussel, Belgium, industrial grant, main researcher.
- 1/9/98 - 31/8/2000, 5 FP EU ESPRIT Project 22641 Phase II, Information Technologies Programme “Optoelectronic Interconnects for Integrated Circuits (OIIC) Generic approach to manufacturable interconnects for VLSI circuits”, Vrije Universiteit Brussel, Belgium, researcher.

PRINCIPAL INVESTIGATOR IN NATIONAL GRANTS

- 09/2014-08/2015 IMPULS, FNP, Nanostrukturyzowane mikrosoczewki gradientowe w systemach fonicznych, 27/UD/SKILLS/2014, **project leader**
- 05/2014-05/2017 NCN HARMONIA, 2013/10/M/ST3/00708, *Study of optical properties of all-dielectric nanostructured axicons and integrated multifocus microstructures*, **project leader, principal investigator.**
- 07/2012-12/2015 FNP TEAM/2012-9/1 *Novel light sources based on photonic crystal fibers with nanostructured cores*, **project leader, principal investigator**
- 04/2010 - 04/2012, GRANT MNISW nr N N515 523738, *Supercontinuum generation in midIR in photonic crystal fibers*, **project leader, principal investigator.**
- 09/2009-08/2011, GRANT MNSW nr NN515 244737, *Design and development of photonic crystal fibers with structured core and birefringent photonic cladding*, **project leader, principal investigator.**
- 04/2007 – 09/2009, GRANT MNISW, R&D grant R02 04302, *Supercontinuum light sources with nonlinear microstructured fibers made of soft glasses: design and development of the fibers and demonstrator construction with pulsed lasers*, **project leader, principal investigator.**
- 06/2006 – /05/2008, GRANT MNII nr 3 T11B 072 30, *Design and development of microstructured fibers with photonic band gap based on multicomponent glasses*, **project leader, principal investigator.,.**
- 15/10/2002 – 15/10/2004, GRANT KBN nr 4 T11B 051 23, *Design and development of photonic crystal fibers made of multicomponent glasses*, **project leader, principal investigator.**
- PARTICIPANTION AS A MAIN RESEARCHER: ADDITIONAL 7 NATIONAL GRANTS (2006-2016).

INTERNATIONAL AND NATIONAL RESEARCH PRIZES AND SCHOLARSHIPS

- 10/2015 OSA Spotlight on Optics – Highlighted Articles from OSA Journals September 2015 - J. Pniewski, at al., Opt. Mat. Express, 5(10), 2366-2376 (2015)2015,
- 3rd award for scientific achievements, Rector of University of Warsaw,
- 2014, 1st prize IMPULS, The Foundation for Polish Science, 1st edition
- Laser Focus World TECHNOLOGY REV. 2012: TOP 20 PHOTONICS INNOVATIONS OF 2012 LIGHT THE WAY TO FUTURE ADVANCES, Laser Focus World, December 2012 for innovation: Nanostructured optical elements
- 2012, 3rd award for scientific achievements, Rector of University of Warsaw,
- 2011, 'Top 500 Innovators Science - Management - Commercialization', Ministry of Science and Higher Education, 1st edition, training scholarship.
- 2002, Stypendium 'Polityki' („Polityka” Scholarship) – awards for young scientists
- 2003, 2004, 2005, 2006, 2007, research scholarship of Rector of Warsaw University;
- ·10/1997-03/1998, research scholarship of Flemish Government, Vrije Universiteit Brussel, Belgium;
- ·03/1995-09/1995, research training, EU TEMPUS, Vrije Universiteit Brussel, Belgium;
- ·06/1993-09/1993, research training, Optoelectronic Laboratory, University of Quebec at Hull, Canada

ORGANIZATION EFFORTS

- Technical Programme Committee .- IEEE LEOS - Winter Topical Conference 2008
- 14th Microoptical Conference MOC 2008
 - EOS Annual Meeting 2010, Micro-Optics Conference, 2010
 - EOS Annual Meeting 2012, Micro-Optics Conference, 2012
 - CLEO-Europe/IQEC 2013, CJ – Fibre and Guided Wave Lasers and Amplifiers
 - CLEO-Europe/IQEC 2015, CJ – Fibre and Guided Wave Lasers and Amplifiers
 - Optical Fibres and their Applications - TAL 2015, Naleczow, Sept 2015
 - Optofluidics Workshop COST MP1205, Istanbul, May 2016
- Since 10/2015 Member of Research Council at Institute of Electronic Materials Technology
- Since 10/2015 Member of Steering Committee and Program Board of Centre for Graphene and Innovation Nanotechnologies
- 07/2012 – 06/2016, MC Member of COST action MP1205 Advances in Optofluidics: Integration of Optical Control and Photonics with Microfluidics,
- 04/2012 – 04/2016, MC Member of COST action TD1104 - European network for development of electroporation-based technologies and treatments (EP4Bio2Med),
- 07/2012 – 06/2016, MC Substitute Member of COST action MP1204 - TERA-MIR Radiation: Materials, Generation, Detection and Applications,

PUBLICATIONS (SELECTED TOP 20 PUBLICATIONS 2016-2013)

ISI WEB OF SCIENCE: H-index =17, total number of citations: 893, 183 publ. indexed in ISI Web of Science.

- 1) R. Buczynski, *at al.*, Appl. Opt., Vol. 55(1), 89-94 (2016).
- 2) M. Klimczak, *at al.*, Sci. Rep., 6, 19284 (2016).
- 3) A. Filipkowski *at al.*, Opt. Lett. 40(22), 5200-5203 (2015).
- 4) R. Kasztelanica, *at al.*, Infrared Physics & Technology, **73**, 212-218 (2015).

- 5) J. Pniewski, *at al.*, Opt. Mat. Express, **5(10)**, 2366-2376 (2015).
- 6) R. Buczynski, *at al.*, Opt. Express, **23(20)**, 25588-25596 (2015).
- 7) B. Siwicki, *at al.*, Opt. Fib. Technol. , **25** 64-71. 2015.
- 8) B. Salski, *at al.*, Journal of Lightwave Technology, 33(13), 2905-2912 (2015).
- 9) R. Kasztelanica *at al.*, Infrared Physics & Technology, **71**, 307-312 (2015).
- 10) M. Klimczak, *at al.*, Opt. Express **22(26)**, 31635-31645 (2014).
- 11) M. Klimczak, *at al.*, Opt. Express, **22(15)** 18824-18832 (2014).
- 12) M. Klimczak *at al.*, J. Opt. **16(8)** 085202 (2014).
- 13) M. Franczyk *at al.*, Las. Phys. Lett. 11(7), 085104, 2014.
- 14) T. Martynkien, *at al.*, Opt. Lett. 39(8), 2342–2345 (2014).
- 15) G. Stepniewski, *at al.*, Las. Phys. Lett. 11(5), 055103, 2014.
- 16) G. Sobon, *at al.*, Opt. Mat. Express, 4, 2147-2155 (2014).
- 17) M. Klimczak, *at al.*, Opt. .Lett., 38 (22), 4679-4682 (2013).
- 18) S. Heyvaert, *at al.*, Opt. Express 21, 25403-25417 (2013)
- 19) S. Heyvaert, H. *at al.*, Opt. Express, vol. 21(19), 21991-22011 (2013).
- 20) R. Stepień, *at al.*, Opt. Mater., 35(8), 1587-1594 (2013).

COMMERCIALIZATION SKILL AND RESEARCH IMPLEMENTATION

EDUCATION IN RESEARCH COMERCIALIZATION

- 10/2011 – 12/2011 :2 months training on science management and commercialization, Stanford Center of Professional Development, Stanford University, USA.
- 02/2012 – 01/2013: postgraduate study in Management of Innovations, Warsaw School of Economics (SGH), Warsaw, Poland.
- 05/ 2013 – 06/2013: Training of innovation entrepreneurship FastTrac Techventure, Kaufman Foundation, FNP, Warsaw, Poland.

PATENTS

- 1) ·R. Buczynski, M. Taghizadeh, patent nr WO2008/009873 „Fabrication of nanostructured materials”, published 24.01.2008.
- 2) ·R. Buczynski, M. Taghizadeh, patent nr WO2009/000964, „Birefringent material”, published 22.10.2009.
- 3) R. Buczynski, D. Pysz, R. Stepień, patent application P-409831, “Microprobe for selective electroporation and method of its development”, filed 21.10.2014
- 4) R. Buczynski, T. Stefaniuk, J. Pniewski, D. Pysz, G. Stępniewski, R. Stepień, patent application P- 411696, Światłowod foniczny do przenoszenia wiązki światła spolaryzowanej radialnie i sposób wytwarzania takiego światłowodu, filed 25.03.2015.

INVOLVMENT IN INDUSTRIAL AND COMERCIALIZATION PROJECTS

- • 01/03/99-28/02/2001, IWT62 - ITAII 'Barco Projection Systems', Institute for Scientific and Technological Research-Flanders, New technologies for projectors dedicated to Electronic Cinema, Vrije Universiteit Brussel, Belgium, industrial grant, main researcher.
- 01/09/1999-31/08/2000, IWT86 - XEMEX NV, Institute for Scientific and Technological Research-Flanders, Optoelectronic non-contact system for remote automated read-out of electrical, gas and water meters, Vrije Universiteit Brussel, Belgium, industrial grant, main researcher.

EXHIBITIONS OF INVENTIONS

- 04/2015 - Bronze medal for innovation: Elements optique nanostructures avec indice variable, R. Buczyński *at al.*, 43rd International Invention Exhibition "Geneva inventions", Swiss.
- 05/2016 - Silver medal for: M. Klimczak, R. Buczyński, D. Pysz, B. Piechal, Nanostructured Gradient-Index Optical Elements , 26th Malaysia International Invention Innovation & Technology Exhibition „ITEX 2015”, Kuala Lumpur.
- 10/2015 - Gold medal with mention for innovation: Nanostructured Gradient-Index Optical Elements R. Buczyński, *at al.*, IX International Warsaw Invention Show IWIS 2015, Warsaw.
- 10/2015 - Silver medal for innovation: Fiber Microprobe for Selective Electroporation of Internal Organs, R. Buczyński, *at al.*, IX International Warsaw Invention Show IWIS 2015, Warsaw.

RESEARCH IMPLEMENTATION AND TECHNOLOGY DEVELOPMENT ACHIEVEMENTS

- 2008 - R. Buczyński, D. Pysz, R. Stepień, I. Kujawa Microstructured fibers with photonic band gap made on soft glass, implementation of technology, ITME
- 2009 - R. Buczyński, D. Pysz, R. Stepień, I. Kujawa, Photonic crystal fibers for supercontinuum generation, implementation of technology, ITME.