

**НАСТАВНО-НАУЧНОМ ВЕЋУ
ЕЛЕКТРОТЕХНИЧКОГ ФАКУЛТЕТА УНИВЕРЗИТЕТА У БЕОГРАДУ**

Предмет: Извештај Комисије за избор у звање гостујућег професора за ужу научну област Физичка електроника.

На основу одлуке Наставно-научног већа Електротехничког факултета број 985/2 од 02.07.2015. године именовани смо за чланове Комисије за избор др Горана Машановића, ванредног професора Универзитета у Саутхемптону, Велика Британија (Optoelectronics Research Centre, Faculty of Physical Sciences and Engineering, University of Southampton, UK), у звање гостујућег професора за ужу научну област Физичка електроника.

Након увида у достављену документацију подносимо следећи

ИЗВЕШТАЈ

А. Биографски подаци

Горан Машановић је рођен 4. априла 1969. године у Лозници, Република Србија. Одрастао је у Ваљеву где је завршио и основну и средњу школу. Студије на Електротехничком факултету Универзитета у Београду уписује 1988. а студије започиње 1989. после одслуженог војног рока. Дипломирао је 1995. са просеком 9,52 и добио Универзитетску награду као најбољи студент на ЕТФ-у 1995. године. Магистарску тезу предаје 1998. а брани је 1999. на Електротехничком факултету у Београду. Докторирао је 2005. године на Универзитету Сари, Гилфорд, УК.

Од завршетка основних студија до 2000. године, ради на Електротехничком факултету као асистент на Катедри за микроелектронику и техничку физику. У септембру 2000. године одлази у Уједињено Краљевство на Универзитет Сари у Гилфорду где ради на пројекту развоја спрежника између оптичког влакна и силицијумског таласовода. Истовремено ради на докторској тези коју успешно брани априла 2005. (Thesis: "Dual Grating-Assisted Directional Coupler in Silicon-on-Insulator"; Supervisor: Prof. Graham T. Reed). 2008. године добија најпрестижнији истраживачки фелоушип, the Royal Society Research Fellowship. Од 180 пријава из целог света, пројекат Горана Машановића је био рангиран као број 1.

2010. године постаје доцент (Lecturer), а 2011. ванредни професор (Senior Lecturer) на Универзитету Сари. У априлу 2012. године, заједно са целом групом за Силицијумску фотонику, прелази на Универзитет у Саутхемптону, у звању Reader (звање које је по рангу између ванредног и редовног професора).

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Професионална каријера

2012 –	Optoelectronics Research Centre, University of Southampton, UK
2012	Reader / Royal Society Research Fellow

2000 – 2012	Advanced Technology Institute, University of Surrey, Guildford, UK
2011	Senior Lecturer / Royal Society Research Fellow
2010	Lecturer / Royal Society Research Fellow
2008	Royal Society Research Fellow
2006	Silicon Photonics Group Manager
2000	Research Fellow
1995 – 2000	Teaching and Research Assistant, University of Belgrade, Serbia

Б. Образовање

Sep 2007 – May 2009	MSc in innovative teaching (Postgraduate Certificate in Academic Practice), University of Surrey, Guildford, UK (82%, <i>top mark in the cohort</i>) Thesis: “ <i>Electronic Voting System</i> ”
Oct 2000 - Mar 2005	PhD (part time), University of Surrey, Guildford, UK School of Electronics and Physical Sciences Thesis: “ <i>Dual grating-assisted directional coupler in SOP</i> ”
Oct 1995 – May 1999	M. Sc. In Optoelectronics, University of Belgrade, Serbia, Faculty of Electrical Engineering Thesis: “ <i>Fiber optic electric current sensor</i> ”
Oct 1989 – Jun 1995	Dipl. Ing., University of Belgrade, Serbia, Faculty of Electrical Engineering Major: <i>Engineering Physics (average mark 9.52 out of 10)</i> (<i>the best student in the generation</i>)

В. Наставне активности

- Teaching based on Peer Instruction and Just in Time Teaching methods
- Interactive teaching using e-learning, Electronic Voting System, group work, online assignments
- Best student feedback in Electronic Engineering Department, University of Surrey (2010, 2011 and 2012)
- Best student feedback in Optoelectronics Research Centre, University of Southampton (2014)
- Best student feedback on record for Linear Systems Analysis module, Surrey (2007 and 2008)
- Postgraduate Certificate in Academic Practice (PGCAP), 2007–2009, 82%, top mark in the cohort
- Collaboration with several academics at universities of Southampton, Surrey, City, and Harvard
- Best PGCAP portfolio award (2009) and Teaching and Learning Award (2010), University of Surrey
- Modules taught:

Year 1	Solid State Devices (Southampton)
	Engineering Design and Professional Studies (module coordinator, Surrey)
	Analogue Electronics (Surrey)
	Physics (Belgrade)
Year 2	Electronics (module coordinator, Surrey)
	Linear Systems Analysis (Surrey)
	Semiconductor Physics (Belgrade)
Year 3	Final year projects (Belgrade, Surrey, Southampton)

Year 4 Optoelectronics (Belgrade)
 MSc Introduction to Silicon Photonics (Southampton)
 MSc projects (Southampton)

Г. Библиографија научних и стручних радова

Invited/keynote presentations at international conferences: 16

Total number of citations: 2100

Examiner/evaluator inter/national research funding agencies: 6

International conference programme committee member: 12

Journal editor: 2

International conference session chairman: 10

Reviewers for international journals: 20

PhD/MSc/MEng degree examiner: 20

Advising bodies: 3

Тренутни истраживачки пројекти

Title	Funding body	Value	Duration
High Value Photonic Manufacturing	EPSRC	£10m	2015-2022
Silicon Photonics for Future Systems (EP/L00044X/1)	EPSRC	£6.0m	2013-2019
CORNERSTONE (EP/L021129/1)	EPSRC	£3.2m	2014-2018
MIGRATION (EP/L01162X/1)	EPSRC	£850k	2014-2016
Royal Society Research Fellowship (UF120053)	Royal Society	£880k	2008-2016
A cutting-edge silicon based Mid-IR photonics platform for emerging communication and sensing applications	NRF Singapore	£4.7m	2014-2019
Knowledge Transfer Secondment	EPSRC	£50k	2014-2015
Current grants - total		£25.7m	

Чланство у професионалним удружењима:

IEEE, Member

Optical Society of America, Member

Higher Education Academy, Fellow

Награде:

- Royal Society Research Fellowship, 2008 (No 1 in Engineering ranking list, 180 applicants)
- Royal Society Research Fellowship renewal (2013-2016)
- Royal Academy of Engineering/EPSRC Research Fellowship, 2008 (offered)
- Learning and Teaching Award for introducing innovative teaching methods, University of Surrey, 2010

- Higher Education Academy Fellow, 2009
- Best Postgraduate Certificate in Academic Practice portfolio award, University of Surrey, 2009
- Proof of Concept Award to develop novel silicon photonics coupler, University of Surrey, 2005
- Bonus payment for outstanding research and teaching, 2009, 2008 and 2005, University of Surrey
- Best scientific photography award from the Royal Society and University of Southampton (2013)

Објављени радови: Др Машановић је аутор 223 рада из области силицијумске фотонице, од којих је 68 објављено у часописима, а 7 су поглавља у књигама. Иницирао је област силицијумске фотонице за средњу инфрацрвену област у УК, и од 2008. је објавио преко 80 радова из ове области што га чини једним од водећих светских аутора. Вредност његовог "H" индекса је 21 (Google scholar).

Поглавља у књигама: 7

Радови у часописима: 68 (64 у часописима са JCR листе)

Конференцијски радови по позиву: 57 (Др Машановић презентовао 16)

Радови у зборницима конференција: 91

PUBLICATIONS 2002-2015

Book Chapters

1. **G. Z. Mashanovich** and M. M. Milosevic, "Long wavelength silicon photonics," in *Handbook of Silicon Photonics* (Eds. Pavesi, Vivien), CRC Press, Taylor & Francis Group, ISBN 1439836108, 2013.
2. G. T. Reed, W. R. Headley, **G. Z. Mashanovich**, F. Y. Gardes, D. J. Thomson, M. M. Milosevic, "The evolution of integration," in *Silicon Photonics for Telecommunications and Biomedical Applications*, Eds. Bahram Jalali and Sasan Fathpour, Taylor & Francis Books, Inc., ISBN 1439806373, 2010.
3. **G. Z. Mashanovich**, F. Y. Gardes, M. M. Milosevic, C. E. Png, and G. T. Reed, "Silicon photonic waveguides and modulators" in *VLSI Micro/Nanophotonics: Science, Technology, Applications*, Eds. El-Hang Lee, Manijeh Razeghi, and Louay Eldada, Marcel Dekker, Inc., ISBN 1574447297, 2010.
4. **G. Z. Mashanovich**, G. T. Reed, B. D. Timotijevic and S. P. Chan, "Silicon photonic waveguides," in *Silicon photonics – the state of the art*, Ed. G. T. Reed, Wiley, ISBN 9780470025796, 2008.
5. G. T. Reed, F. Y. Gardes, **G. Z. Mashanovich**, and C. E. Png, "Optical modulators," in *Silicon photonics – the state of the art*, Ed. G. T. Reed, Wiley, ISBN 9780470025796, 2008.
6. **G. Z. Mashanovich** and G. T. Reed, "Coupling to small silicon waveguides," in *Silicon Photonics*, Ed. V. M. N. Passaro, Research Signpost, Kerala, India, ISBN 8130800772, 2006.
7. F. Y. Gardes, G. T. Reed, and **G. Z. Mashanovich**, "Optical modulators in silicon," in *Silicon Photonics*, Ed. V. M. N. Passaro, Research Signpost, Kerala, India, ISBN 8130800772, 2006.

Journal Papers

2015 (11)

1. J. J. Ackert, D. J. Thomson, L. Shen, A. C. Peacock, P. E. Jessop, G. T. Reed, **G. Z. Mashanovich**, and A. P. Knights, "High-speed detection above the telecommunication windows with monolithic

- silicon photodiodes,” *Nature Photonics*, vol. 9, pp. 393-396, 2015. [ISSN: 1749-4885, IF(2013) 29.958]
2. R. Bruck, B. Mills, B. Troia, D. J. Thomson, F. Y. Gardes, Y. Hu, **G. Z. Mashanovich**, V. M. N. Passaro, G. T. Reed, and O. L. Muskens, “Device level characterization of the flow of light in integrated photonic circuits using ultrafast photomodulation spectroscopy,” *Nature Photonics*, vol. 9, pp. 54–60, 2015. [ISSN: 1749-4885, IF(2013) 29.958]
 3. C. G. Littlejohns, C. F. Mallinson, M. Nedeljkovic, J. F. Watts, **G. Z. Mashanovich**, G. T. Reed, and F. Y. Gardes, “Next generation device grade silicon-germanium on insulator,” *Scientific Reports*, vol. 5, article 8288, 2015. [ISSN: 2045-2322 IF(2013) 5.078]
 4. R. Bruck, B. Mills, D. J. Thomson, B. Troia, V. M. N. Passaro, **G. Z. Mashanovich**, G. T. Reed, and O. L. Muskens, “Picosecond optically reconfigurable filters exploiting full free spectral range tuning of single ring and Vernier effect resonators,” *Optics Express*, vol. 23, pp. 12468-12477, 2015. [ISSN: 1094-4087 IF(2013) 3.525]
 5. **G. Z. Mashanovich**, F. Y. Gardes, D. J. Thomson, Y. Hu, K. Li, M. Nedeljkovic, J. Soler Penades, A. Z. Khokhar, C. J. Mitchell, S. Stankovic, R. Topley, S. A. Reynolds, Y. Wang, B. Troia, V. M. N. Passaro, C. G. Littlejohns, T. Dominguez Bucio, P. R. Wilson, and G. T. Reed, “Silicon photonic waveguides and devices for near- and mid-IR applications,” *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 21, article 8200112, 2015. [ISSN: 1077-260X IF(2013) 3.465]
 6. L. Shen, N. Healy, C. J. Mitchell, J. Solar Penades, M. Nedeljkovic, **G. Z. Mashanovich**, and A. C. Peacock, “Two-photon absorption and all-optical modulation in germanium-on-silicon waveguides for the mid-infrared,” *Optics Letters*, vol. 40, pp. 2213-2216, 2015. [ISSN: 0146-9592 IF(2013) 3.179]
 7. L. Shen, N. Healy, C. J. Mitchell, J. S. Penades, M. Nedeljkovic, **G. Z. Mashanovich**, and A. C. Peacock, “Mid-infrared all-optical modulation in low loss germanium-on-silicon waveguides,” *Optics Letters*, vol. 40, pp. 268–271, 2015. [ISSN: 0146-9592 IF(2013) 3.179]
 8. M. Nedeljkovic, R. Soref, and **G. Z. Mashanovich**, “Predictions of free-carrier electroabsorption and electrorefraction in germanium,” *IEEE Photonics Journal*, vol. 7, article 2600214, 2015. [ISSN: 1943-0655 IF(2013) 2.330]
 9. J. Soler Penades, A. Z. Khokhar, M. Nedeljkovic, and **G. Z. Mashanovich**, “Low loss mid-infrared SOI slot waveguides,” *IEEE Photonics Technology Letters*, vol. 27, pp. 1197-1199, 2015. [ISSN: 1041-1135 IF(2013) 2.176]
 10. M. Nedeljkovic, J. Soler Penades, C. J. Mitchell, T. Dominquez Bucio, A. Z. Khokhar, C. Littlejohns, F. Y. Gardes, and **G. Z. Mashanovich**, “Surface grating coupled low loss Ge-on-Si rib waveguides and multimode interferometers,” *IEEE Photonics Technology Letters*, vol. 27, pp. 1040-1043, 2015. [ISSN: 1041-1135 IF(2013) 2.176]
 11. B. Troia, A. Z. Khokhar, M. Nedeljkovic, S. A. Reynolds, Y. Hu, **G. Z. Mashanovich**, and V. M. N. Passaro, “Design procedure and fabrication of reproducible silicon Vernier devices for high-performance refractive index sensing,” *Sensors*, vol. 15, pp. 13548-13567, 2015. [ISSN: 1424-8220 IF(2014) 2.245]

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12. J. Soler Penades, C. Alonso-Ramos, A. Z. Khokhar, M. Nedeljkovic, L. A. Boodhoo, A. Ortega-Monux, I. Molina-Fernandez, P. Cheben, and **G. Z. Mashanovich**, “Suspended SOI waveguide with sub-wavelength grating cladding for mid-infrared,” *Optics Letters*, vol. 39, pp. 5661-5664, 2014. [ISSN: 0146-9592 IF(2013) 3.179]
13. B. Troia, A. Z. Khokhar, M. Nedeljkovic, J. Soler Penades, V. M. N. Passaro, and **G. Z. Mashanovich**, “Cascade-coupled racetrack resonators based on the Vernier effect in mid-infrared,” *Optics Express*, vol. 22, pp. 23990-24003, 2014. [ISSN: 1094-4087 IF(2013) 3.525]
14. I. F. Crowe, N. Clark, S. Hussein, B. Towlson, E. Whittaker, M. M. Milosevic, F. Y. Gardes, **G. Z. Mashanovich**, M. P. Halsall, and A. Vijayaraghavan, “Determination of the quasi-TE mode (in-plane) graphene linear absorption coefficient via integration with silicon-on-insulator racetrack cavity resonators,” *Optics Express*, vol. 22, pp. 18625–18632, 2014. [ISSN: 1094-4087 IF(2013) 3.525]

15. D. J. Thomson, L. Shen, J. J. Ackert, E. Huante-Ceron, A. P. Knights, M. Nedeljkovic, A. C. Peacock, and **G. Z. Mashanovich**, "Optical detection and modulation at $2\mu\text{m}$ - $2.5\mu\text{m}$ in silicon," *Optics Express*, vol. 22, pp. 10825-10830, 2014. [ISSN: 1094-4087 IF(2013) 3.525]
16. M. Nedeljkovic, S. Stanković, C. Mitchell, A. Z. Khokhar, S. Reynolds, D. J. Thomson, F. Y. Gardes, C. Littlejohns, G. T. Reed, and **G. Z. Mashanovich**, "Mid-infrared thermo-optic modulators in SOI," *IEEE Photonics Technology Letters*, vol. 26, pp. 1352-1355, 2014. [ISSN: 1041-1135 IF(2013) 2.176]
17. R. Topley, G. Martinez-Jimenez, L. O'Faolain, N. Healy, S. Mailis, D. J. Thomson, F. Y. Gardes, A. C. Peacock, D. N. R. Payne, **G. Z. Mashanovich**, and G. T. Reed, "Locally erasable couplers for optical device testing in silicon on insulator," *Journal of Lightwave Technology*, vol. 32, pp. 2248-2253, 2014. [ISSN: 0733-8724 IF(2013) 2.862]
18. Y. Hu, T. Li, D. J. Thomson, X. Chen, J. Soler Penades, A. Z. Khokhar, C. J. Mitchell, G. T. Reed, and **G. Z. Mashanovich**, "Wavelength division (de)multiplexing in mid-infrared wavelength range using interleaved angled multimode interferometer on the silicon-on-insulator platform," *Optics Letters*, vol. 39, pp. 1406-1409, 2014. [ISSN: 0146-9592 IF(2013) 3.179]
19. Y. Hu, C. G. Littlejohns, F. Y. Gardes, D. J. Thomson, S. A. Reynolds, **G. Z. Mashanovich**, and G. T. Reed, "50 Gb/s silicon photonics receiver with low insertion loss," *IEEE Photonics Technology Letters*, vol. 26, pp. 714-717, 2014. [ISSN: 1041-1135 IF(2013) 2.176]
20. D.-X. Xu, J. Schmid, G. T. Reed, **G. Z. Mashanovich**, D. J. Thomson, M. Nedeljkovic, X. Chen, D. Van Thourhout, and S. Keyvaninia, "Silicon photonics integration platform – have we found the sweet spot?" *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 20, article 8100217, 2014. [ISSN: 1077-260X IF(2013) 3.465]
21. R. Topley, L. O'Faolain, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, and G. T. Reed, "Planar surface implanted diffractive grating couplers in SOI," *Optics Express* vol. 22, pp. 1077-1084, 2014. [ISSN: 1094-4087 IF(2013) 3.525]
22. G. Roelkens, U. Dave, A. Gassenq, N. Hattasan, C. Hu, B. Kuyken, F. Leo, A. Malik, M. Muneeb, E. Ryckeboer, Z. Hens, R. Baets, Y. Shimura, F. Gencarelli, B. Vincent, R. Loo, J. Van Campenhout, L. Cerutti, J.-B. Rodriguez, E. Tournié, X. Chen, M. Nedeljkovic, **G. Z. Mashanovich**, S. Li, N. Healy, A. C. Peacock, X. Liu, R. Osgood, and W. J. Green, "Silicon-based photonic integration beyond the telecommunication wavelength range," *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 20, article 8201511, 2014. [ISSN: 1077-260X IF(2013) 3.465]
23. G. T. Reed, D. J. Thomson, F. Y. Gardes, Y. Hu, J.-M. Fedeli, and **G. Z. Mashanovich**, "High-speed carrier-depletion silicon Mach-Zehnder optical modulators with lateral PN junctions," *Frontiers in Physics*, vol. 2, 77, 2014, [ISSN: 2296-424X]

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24. M. Nedeljkovic, A. Z. Khokhar, Y. Hu, X. Chen, J. Soler Penades, S. Stankovic, D. J. Thomson, F. Y. Gardes, H. M. H. Chong, G. T. Reed, and **G. Z. Mashanovich**, "Silicon photonic devices and platforms for the mid-infrared" *Optical Materials Express*, vol. 3, pp. 1205-1214, 2013. (invited) [ISSN: 2159-3930 IF(2013) 2.923]
25. G. Roelkens, U. Dave, A. Gassenq, N. Hattasan, C. Hu, B. Kuyken, F. Leo, A. Malik, M. Muneeb, E. Ryckeboer, Z. Hens, R. Baets, Y. Shimura, F. Gencarelli, B. Vincent, R. Loo, J. Van Campenhout, L. Cerutti, J.-B. Rodriguez, E. Tournié, X. Chen, M. Nedeljkovic, **G. Z. Mashanovich**, S. Li, N. Healy, A. C. Peacock, X. Liu, R. Osgood, and W. J. Green, "Silicon-based heterogeneous photonic integrated circuits for the mid-infrared," *Optical Materials Express*, vol. 3, pp. 1523-1536, 2013. [ISSN: 2159-3930 IF(2013) 2.923]
26. T. M. Ben Masaud, A. Tarazona, E. Jaberansary, X. Chen, G. T. Reed, **G. Z. Mashanovich**, and H. M. H. Chong, "Hot-wire polysilicon waveguides with low deposition temperature," *Optics Letters*, vol. 38, pp. 4030-4032, 2013. [ISSN: 0146-9592 IF(2013) 3.179]
27. Y. Hu, F. Y. Gardes, D. J. Thomson, **G. Z. Mashanovich**, and G. T. Reed, "Coarse wavelength division (de)multiplexer using interleaved angled multimode interferometer structure," *Applied Physics Letters*, vol. 102, 251116, 2013. [ISSN: 0003-6951 IF(2013) 3.515]
28. D. J. Thomson, F. Y. Gardes, S. Liu, H. Porte, L. Zimmermann, J-M Fedeli, Y. Hu, M. Nedeljkovic, X. Yang, P. Petropoulos, and **G. Z. Mashanovich**, "High performance Mach Zehnder based silicon optical modulators," *IEEE Journal of Selected Topics in Quantum Electronics*, vol.

19, article 3400510, 2013. [ISSN: 1077-260X IF(2013) 3.465]

29. M. Muneeb, X. Chen, P. Verheyen, S. Pathak, A. Malik, M. Nedeljkovic, J. Van Campenhout, **G. Z. Mashanovich**, and G. Roelkens, "Demonstration of silicon-on-insulator mid-infrared spectrometers operating at 3.8 μ m," *Optics Express*, vol. 21, pp. 11659–11669, 2013. [ISSN: 1094-4087 IF(2013) 3.525]
30. E. Jaberansary, T. B. Masaud, M. M. Milosevic, M. Nedeljkovic, **G. Z. Mashanovich**, and H. M. H Chong, "Scattering loss estimation using 2D Fourier analysis approach to model 3D roughness on optical waveguide sidewalls," *IEEE Photonics Journal*, vol. 5, article 6601010, 2013. [ISSN: 1943-0655 IF(2013) 2.330]
31. D. J. Thomson, F. Y. Gardes, D. C. Cox, J-M. Fedeli, **G. Z. Mashanovich**, and G. T. Reed, "Self-Aligned Silicon Ring Resonator Optical Modulator with Focused Ion Beam Error Correction," *Journal of Optical Society of America B*, vol. 30 (2), pp. 445-449, 2013. [ISSN: 0740-3224 IF(2013) 1.806]
32. G. T. Reed, **G. Z. Mashanovich**, F. Y. Gardes, M. Nedeljkovic, D. J. Thomson, L. Ke, P. Wilson, S-W. Chen and S. H. Hsu, "Recent breakthroughs in carrier depletion based silicon optical modulators," *Nanophotonics*, vol. 3, pp. 229-245, 2013. [ISSN: 2192-8606 IF(2014) 5.686]

2012 (4)

33. C. Reimer, M. Nedeljkovic, D. J. M. Stothard, M. O. S. Esnault, C. Reardon, L. O’Faolain, M. Dunn, **G. Z. Mashanovich**, and T. F. Krauss, "Mid-infrared photonic crystal waveguides in SOI," *Optics Express*, vol. 20 (28), pp. 29361-29368, 2012. [ISSN: 1094-4087 IF(2012) 3.546]
34. M. M. Milosevic, M. Nedeljkovic, T.-B. Masaud, E. Jaberansary, H. M. H. Chong, N. G. Emerson, G. T. Reed, and **G. Z. Mashanovich**, "Silicon waveguides and devices for the mid-infrared," *Applied Physics Letters*, vol. 101, 121105, 2012. [ISSN: 0003-6951 IF(2012) 3.794]
35. D. J. Thomson, F. Y. Gardes, J-M. Fedeli, S. Zlatanovic, Y. Hu, B. P.-P. Kuo, E. Myslivets, N. Alic, S. Radic, **G. Z. Mashanovich**, and G. T. Reed, "50 Gbit/s silicon optical modulator," *IEEE Photonics Technology Letters* vol. 24, pp. 234-236, 2012. [ISSN: 1041-1135 IF(2012) 2.038] (180 citations)
36. T. Keca, P. Matavulj, W. Headley, and **G. Mashanovich**, "Free spectral range adjustment of a silicon rib racetrack resonator," *Physica Scripta*, T149, 014031, 2012. [ISSN: 0031-8949 IF(2012) 1.032]

2011 (7)

37. M. M. Milošević, N. G. Emerson, F. Y. Gardes, X. Chen, A. A.D.T. Adikaari, **G. Z. Mashanovich**, "Athermal waveguides for optical communication wavelengths," *Optics Letters*, vol. 36, pp. 4659-4661, 2011. [ISSN: 0146-9592 IF(2013) 3.399]
38. Y. Hu, R. M. Jenkins, F. Y. Gardes, E. D. Finlayson, **G. Z. Mashanovich**, and G. T. Reed, "Wavelength division (de)multiplexing based on waveguide mode dispersion," *Optics Letters*, vol. 36, pp. 4488-4490, 2011. [ISSN: 0146-9592 IF(2011) 3.399]
39. M. Nedeljkovic, R. Soref, and **G. Z. Mashanovich**, "Free-carrier electro-refraction and electro-absorption modulation predictions for silicon over the 1-14 μ m wavelength range," *IEEE Photonics Journal*, vol. 3, pp. 1171-1180, 2011. [ISSN: 1943-0655 IF(2011) 2.320]
40. **G. Z. Mashanovich**, M. M. Milosevic, M. Nedeljkovic, N. Owens, B. Xiong, E.-J. Teo, and Y. Hu, "Low loss silicon waveguides for the mid-infrared," *Optics Express*, vol. 19, pp. 7112-7119, 2011. [ISSN: 1094-4087 IF(2013) 3.587] (98 citations)
41. R. Loiacono, G. T. Reed, **G. Z. Mashanovich**, R. Gwilliam, S. J. Henley, Y. Hu, R. Feldesh, and R. Jones, "Laser erasable implanted gratings for integrated silicon photonics," *Optics Express*, vol. 19, pp. 10728-10734, 2011. [ISSN: 1094-4087 IF(2013) 3.587]
42. D. J. Thomson, F. Y. Gardes, Y. Hu, **G. Mashanovich**, M. Fournier, P. Grosse, J-M. Fedeli, and G. T. Reed, "High contrast 40Gbit/s optical modulation in silicon," *Optics Express*, vol. 19, pp. 11507-11516, 2011. [ISSN: 1094-4087 IF(2011) 3.587] (163 citations)
43. **G. Z. Mashanovich**, F. Y. Gardes, D. Thomson, Y. Hu, R. Loiacono, N. Owens, M. M. Milošević, M. Nedeljković, A. N. Ahmed, P. Thomas, R. Topley, and G. T. Reed, "Silicon optical modulators for supercomputing and optical communications," (invited, in Serbian), *Telekomunikacije*, br 7, str. 12-19, July 2011. [ISSN: 1820-7782]

2010 (1)

44. G. T. Reed, **G. Mashanovich**, F. Y. Gardes, and D. Thomson, "Optical modulation in silicon," *Nature Photonics*, vol. 4, pp. 518-526, 2010. [ISSN: 1749-4885, IF(2010) 26.506] (585 citations)

2009 (4)

45. M. Milosevic, P. S. Matavulj, P. Y. Yang, A. Bagolini, and **G. Z. Mashanovich**, "Rib waveguides for mid-infrared silicon photonics", *Journal of Optical Society of America B*, vol. 26, pp. 1760-1766, 2009. [ISSN: 0740-3224 IF(2009) 2.087]
46. B. Timotijevic, **G. Mashanovich**, A. Michaeli, O. Cohen, V. M. N. Passaro, J. Crnjanski, and G. T. Reed, "Tailoring the spectral response of add/drop single- and multiple-resonators in silicon-on-insulator," *Chinese Optics Letters*, vol. 7, pp. 291-295, 2009. [ISSN: 0146-9592 IF(2013) 3.059]
47. E. J. Teo, A. A. Bettiol, P. Yang, M. B. H. Breese, B. Q. Xiong, **G. Z. Mashanovich**, W. R. Headley, and G. T. Reed, "Fabrication of low loss silicon-on-oxidized porous silicon strip waveguides using focused proton beam irradiation," *Optics Letters*, vol. 34, pp. 659-661, 2009. [ISSN: 0146-9592 IF(2013) 3.059]
48. P. Y. Yang, S. Stankovic, J. Crnjanski, E. J. Teo, D. Thomson, A. A. Bettiol, M. B. H. Breese, W. R. Headley, G. T. Reed, and **G. Z. Mashanovich**, "Silicon photonic waveguides for mid- and long-wave infrared regions," *Journal of Materials Science: Materials in Electronics*, vol. 20, pp. S159-S163, 2009. [ISSN: 0957-4522 IF(2009) 1.020]

2008 (8)

49. **G. Z. Mashanovich**, M. Milosevic, P. Matavulj, B. Timotijevic, S. Stankovic, P. Y. Yang, E. J. Teo, M. B. H. Breese, A. A. Bettiol, and G. T. Reed, "Silicon photonic waveguides for different wavelength regions," *Semiconductor Science and Technology*, vol. 23, article 064002, 2008. [ISSN: 0268-1242 IF(2008) 1.434]
50. M. Milosevic, P. Matavulj, B. D. Timotijevic, G. T. Reed, and **G. Z. Mashanovich**, "Design rules for single mode and polarization independent silicon-on-insulator rib waveguides using stress engineering," *Journal of Lightwave Technology*, vol. 26, pp. 1840 – 1846, 2008. [ISSN: 0733-8724 IF(2008) 2.736]
51. N. M. Wright, D. J. Thomson, K. L. Litvinenko, W. R. Headley, A. J. Smith, A. P. Knights, J. H. B. Deane, F. Y. Gardes, **G. Z. Mashanovich**, R. Gwilliam, and G. T. Reed, "Free carrier lifetime modification for silicon waveguide based devices," *Optics Express*, vol. 16, pp. 19779-19784, 2008. [ISSN: 1094-4087 IF(2013) 3.880]
52. E. J. Teo, A. A. Bettiol, M. B. H. Breese, P. Y. Yang, **G. Z. Mashanovich**, W. R. Headley, G. T. Reed, and D. J. Blackwood, "Three-dimensional control of optical waveguide fabrication in silicon," *Optics Express*, vol. 16, pp. 573-578, 2008. [ISSN: 1094-4087 IF(2013) 3.880]
53. D. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, A. Knights, and G. T. Reed, "Using SiO₂ carrier confinement in total internal reflection optical switches to restrict carrier diffusion in the guiding layer," *Journal of Lightwave Technology*, vol. 26, pp. 1288-1294, 2008. [ISSN: 0733-8724 IF(2008) 2.736]
54. F. Dell'Olio, V. M. N. Passaro, **G. Z. Mashanovich**, and F. De Leonadis, "Microracetrack coupled-resonator optical waveguides in silicon photonic wires," *Journal of Optics A: Pure and Applied Optics*, vol. 10, 064003, 2008. [ISSN: 1464-4258 IF(2008) 1.742]
55. A. P. Knights, M. P. Bulk, P. E. Jessop, P. Waugh, R. Loiacono, **G. Z. Mashanovich**, G. T. Reed, and R. M. Gwilliam, "Optical filters utilizing ion implanted Bragg gratings in SOI waveguides", *Advances in Optical Technologies*, vol. 2008, article 276165, 2008. [ISSN: 1687-6393]
56. V. M. N. Passaro, B. Timotijevic, F. Dell'Olio, **G. Z. Mashanovich**, and G. T. Reed, "Polarization-insensitive directional couplers based on SOI wire waveguides", *Open Optics Journal*, vol. 2, pp. 6-9, 2008. [ISSN: 1874-3285]

2007 (5)

57. P. Y. Yang, **G. Z. Mashanovich**, I. Gomez-Morilla, W. R. Headley, G. T. Reed, E. J. Teo, D. J. Blackwood, M. B. H. Breese, and A. A. Bettiol, "Free standing waveguides in silicon," *Applied Physics Letters*, vol. 90, 241109, 2007. [ISSN: 0003-6951 IF(2007) 3.596]

58. F. Y. Gardes, K. L. Tsakmakidis, D. Thomson, G. T. Reed, **G. Z. Mashanovich**, O. Hess, and D. Avitabile, "Micrometer size polarisation independent depletion-type photonic modulator in silicon on insulator," *Optics Express*, vol. 15, pp. 5879-5884, 2007. [ISSN: 1094-4087 IF(2013) 3.709]
59. S. P. Chan, V. M. N. Passaro, **G. Z. Mashanovich**, G. J. Ensell and G. T. Reed, "Third order Bragg grating filters in small SOI waveguides," *Journal of European Optical Society*, vol. 2, 07029, 2007. [ISSN: 1990-2573 IF(2009) 0.797]
60. V. M. N. Passaro, F. De Leonardis, and **G. Z. Mashanovich**, "Investigation of coupling conditions in microgear resonators," *Optics Express*, vol. 15, pp. 797-808, 2007. [ISSN: 1094-4087 IF(2013) 3.709]
61. S. Stankovic, M. Milosevic, B. Timotijevic, P. Y. Yang, E. J. Teo, J. Crnjanski, P. Matavulj, and **G. Z. Mashanovich**, "Silicon photonic waveguides for near- and mid-infrared regions", *Acta Physica Polonica A*, vol. 112, pp. 1019-1024, 2007. [ISSN: 0587-4246 IF(2007) 0.340]

2006 (4)

62. G. T. Reed, **G. Z. Mashanovich**, W. R. Headley, B. Timotijevic, F. Y. Gardes, S. P. Chan, P. Waugh, N. G. Emerson, C. E. Png, M. J. Paniccia, A. Liu, D. Hak, and V. M. N. Passaro, "Issues associated with polarisation independence in silicon photonics," *IEEE Journal of Selected Topics Quantum Electronics*, vol. 12, pp. 1335-1344, 2006. [ISSN: 1077-260X IF(2013) 2.842]
63. G. T. Reed, **G. Z. Mashanovich**, W. R. Headley, S. P. Chan, B. D. Timotijevic, and F. Y. Gardes, "Silicon photonics: are smaller devices always better", *Japanese Journal of Applied Physics*, vol. 45, pp. 6609-6615, 2006. [ISSN: 0021-4922 IF(2006) 1.222]
64. B. D. Timotijevic, F. Y. Gardes, W. R. Headley, G. T. Reed, M. J. Paniccia, O. Kohen, D. Hak, and **G. Z. Masanovic**, "Multi-stage racetrack resonator filters in silicon-on-insulator," *Journal of Optics A: Pure and Applied Optics*, vol. 8, pp. S473-S476, 2006. [ISSN: 1464-4258 IF(2006) 1.604]
65. V. M. N. Passaro and **G. Z. Masanovic**, "Design of SiON-based grating-assisted vertical directional couplers," *Optics Express*, vol. 14, pp. 1055-1063, 2006. [ISSN: 1094-4087 IF(2013) 4.009]

2005 (2)

66. **G. Z. Masanovic**, G. T. Reed, W. Headley, B. Timotijevic, V. M. N. Passaro, R. Atta, G. Ensell, and A. G. R. Evans, "A high efficiency input/output coupler for small silicon photonic devices," *Optics Express*, vol. 13, pp. 7374-7379, 2005. [ISSN: 1094-4087 IF(2005) 3.764]
67. **G. Z. Masanovic**, V. M. N. Passaro, and G. T. Reed, "Coupling to nanophotonic waveguides using a dual grating-assisted directional coupler," *IEE Proceedings in Optoelectronics*, vol. 152, pp. 41-48, 2005. [ISSN: 1350-2433 IF(2005) 0.553]

2003 (1)

68. **G. Z. Masanovic**, V. M. N. Passaro, and G. T. Reed, "Dual grating-assisted directional coupling between fibres and thin semiconductor waveguides," *IEEE Photonics Technology Letters*, vol. 15, pp. 1395-1397, 2003. [ISSN: 1041-1135 IF(2013) 2.258] (63 citations)

Invited/keynote talks

1. **G. Z. Mashanovich** "Group IV mid-IR photonics," 6th EOS Topical Meeting on Optical Microsystems (OμS'15), Capri, Italy, 17-19 September 2015.
2. **G. Z. Mashanovich**, M. Nedeljkovic, J. Soler Penades, C. J. Mitchell, S. Stankovic, C. Howle, A. Ortega-Monux, G. Wanguemert-Perez, R. Halir, I. Molina-Fernandez, P. Cheben, J. J. Ackert, A. P. Knights, G. T. Reed, "Silicon photonics for the mid-infrared," *PHOTONICA'15*, Belgrade, Serbia, 24-28 August 2015.
3. C. J. Mitchell, J. Soler Penades, M. Nedeljkovic, A. Z. Khokhar, S. Stankovic, C. G. Littlejohns, T. Dominquez Bucio, L. Shen, N. Healy, A. C. Peacock, F. Y. Gardes, G. T. Reed and **G. Z. Mashanovich**, "Germanium components for silicon photonics," *2015 International Conference on Optical Instrument and Technology (OIT 2015)*, Beijing, China, 17-19 May 2015.

4. G. T. Reed, Ke Li , D. J. Thomson, S. Liu, P. R. Wilson, Y. Hu, F. Y. Gardes, and **G. Z. Mashanovich**, "Devices for an integrated Silicon Photonics platform," *POEM 2015* (July 2015, China).
5. G. T. Reed, M. Nedeljkovic, J. Soler Penades, C. J. Mitchell, A. Z. Khokhar, C. J. Littlejohns, S. Stankovic, B. Troia, V. M. N. Passaro, L. Shen, N. Healy, A. C. Peacock, A. Ortega-Monux, G. Wanguemert-Perez, I. Molina-Fernandez, P. Cheben, J. J. Ackert, A. P. Knights, D. J. Thomson, F. Y. Gardes, and **G. Z. Mashanovich**, "Group IV mid-IR photonics," *IEEE Summer Topicals Meeting*, Nassau, Bahamas, 13-15 July 2015.
6. D. J. Thomson, K. Li, F. Y. Gardes, Y. Hu, M. Nedeljkovic, C. Littlejohns, R. Topley, A. Z. Khokhar, S. Stanković, J. Soler Penades, C. J. Mitchell, S. A. Reynolds, **G. Z. Mashanovich**, P. R. Wilson and G. T. Reed, "Silicon photonics at the University of Southampton," *PIERS 2015*, Prague, Czech Republic, 6-9 July 2015.
7. D. J. Thomson, B. Troia, M. Nedeljkovic, F. Y. Gardes, J. Soler Penades, A. Z. Khokhar, V. M. N. Passaro, **G. Z. Mashanovich**, and G. T. Reed, "Ring resonator based silicon photonic devices," *PIERS 2015*, Prague, Czech Republic, 6-9 July 2015.
8. P. Cheben, D. Benedikovič, C. Alonso-Ramos, M. Pápeš, J.H. Schmid, D.-X. Xu, S. Janz, S. Wang, M. Vachon, G. Wanguemert-Pérez, R. Halir, A. Ortega-Moñux, I. Molina-Fernández, J.-M. Fédéli, J. Čtyroký, J. S. Penadés, M. Nedeljkovic, **G. Z. Mashanovich**, W. Ye, M. Dado, J. Müllerová, and V. Vašínek, "Subwavelength waveguide structures for optical interconnects and sensing," *ICTON 2015*, Budapest, Hungary, 5-9 July 2015.
9. F. Y. Gardes, C. G. Littlejohns, M. Nedeljkovic, T. Bucio Dominguez, J. Soler Penades, C. J. Mitchell, A. Z. Khokhar, G. T. Reed and **G. Z. Mashanovich**, "Germanium compounds for future photonic systems," *20th Optoelectronics and Communications conference, OECC 2015*, Shanghai, China, 28 June – 2 July, 2015.
10. G. T. Reed, Y. Hu, R. Topley, D. J. Thomson, A. Z. Khokhar, S. Stanković, S. Reynolds, C. J. Mitchell, F. Y. Gardes, G. Martinez-Jimenez, L. O'Faolain, N. Healy, S. Mailis, A. C. Peacock, and **G. Z. Mashanovich**, "Silicon photonics devices for systems and testing," *EOCC 2015*, Shanghai, China, 28 June – 2 July, 2015.
11. **G. Z. Mashanovich**, M. Nedeljkovic, J. Soler Penades, C. J. Mitchell, A. Z. Khokhar, C. J. Littlejohns, S. Stankovic, B. Troia, V. M. N. Passaro, L. Shen, N. Healy, A. C. Peacock, A. Ortega-Monux, G. Wanguemert-Perez, R. Halir, I. Molina-Fernandez, D. Benedikovic, G. S. Murugan, J. S. Wilkinson, P. Cheben, A. Villafranca, J. J. Ackert, A. P. Knights, D. J. Thomson, F. Y. Gardes, G. T. Reed, "Group IV photonics for the mid-infrared," *IPR 2015*, Boston, USA, 27 June – 1 July 2015.
12. **G. Z. Mashanovich**, M. Nedeljkovic, J. Soler Penades, A. Ortega-Monux, G. Wanguemert-Perez, R. Halir, I. Molina-Fernandez, B. Troia, V. M. N. Passaro, "Modelling of mid-infrared silicon photonic devices," *Photonics North 2015*, Ottawa, Canada, 9-11 June 2015.
13. F. Y. Gardes, C. G. Littlejohns, Dominguez Bucio, M. Nedeljkovic, G. T. Reed, and **G. Z. Mashanovich**, "Silicon-germanium on insulator composition engineering for photonic and electronic applications," *Photonics North 2015*, Ottawa, Canada, 9-11 June 2015.
14. G. T. Reed, Y. Hu, R. Topley, D. J. Thomson, A. Z. Khokhar, S. Stanković, S. Reynolds, C. J. Mitchell, F. Y. Gardes, G. Martinez-Jimenez, N. Healy, S. Mailis, A. C. Peacock, and **G. Z. Mashanovich**, "Silicon Photonics based optical devices and circuits," *Energy Materials Technology, Phuket, Thailand*, 4-7 May 2015.
15. D. J. Thomson, K. Li, F. Y. Gardes, Y. Hu, C. Littlejohns, S. A. Reynolds, **G. Z. Mashanovich**, P. R. Wilson and G. T. Reed, "High speed silicon photonic devices," *Energy Materials Nanotechnology conference*, Beijing, China, 14-17 April 2015.
16. **G. Z. Mashanovich**, M. Nedeljkovic, J. Soler Penades, C. J. Mitchell, A. Z. Khokhar, C. J. Littlejohns, S. Stankovic, B. Troia, Y. Wang, S. Reynolds, V. M. N. Passaro, L. Shen, N. Healy, A. C. Peacock, C. Alonso-Ramos, A. Ortega-Monux, G. Wanguemert-Perez, I. Molina-Fernandez, D. J. Rowe, J. S. Wilkinson, P. Cheben, J. J. Ackert, A. P. Knights, D. J. Thomson, F. Y. Gardes, "Group IV Mid-Infrared Photonics," *SPIE Photonics West*, San Francisco, California, USA, 7-12 February 2015. Paper 9367-25
17. G. T. Reed, Y. Hu, **G. Z. Mashanovich**, F. Y. Gardes, D. J. Thomson, J. Soler-Penades, M. Nedeljkovic, A. Khokar, P. Thomas, C. Littlejohns, A. Ahmad, S. Reynolds, R. Topley, C.

- Mitchell, S. Stankovic, D. J. Richardson, P. Petropoulos, P. Thomas, P. R. Wilson, L. Ke, T. M. Ben Masaud, A. Tarazona, and H. Chong, "Near infrared and the mid infrared silicon photonic devices," *Nano Korea 2014 Symposium*, Seoul, South Korea, 2-4 July 2014.
18. **G. Z. Mashanovich**, M. Nedeljkovic, J. Soler Penades, A. Z. Khokhar, C. J. Mitchell, Y. Hu, S. Stankovic, D. J. Thomson, F. Y. Gardes, and G. T. Reed, "Passive and active silicon photonic devices for the mid-IR", *ECIO 2014*, Nice, France, 24-27 June 2014.
 19. G. T. Reed, **G. Z. Mashanovich**, F. Y. Gardes, D. J. Thomson, Y. Hu, J. Soler-Penades, M. Nedeljkovic, A. Khokhar, P. Thomas, C. Littlejohns, A. Ahmad, S. Reynolds, R. Topley, C. Mitchell, S. Stankovic, X. Chen, P. R. Wilson, L. Ke, T. M. Ben Masaud, A. Tarazona, and H. Chong, "Silicon Photonics," *7th International Silicon-Germanium Technology and Device Meeting*, Singapore, 2-4 June 2014. (plenary)
 20. D.-X. Xu, J. H. Schmid, G. T. Reed, **G. Z. Mashanovich**, D. J. Thomson, M. Nedeljkovic, X. Chen, D. Van Thourhout, S. Keyvaninia, and S. K. Selvaraja, "Optimization of SOI thickness for silicon photonics integration," *Photonics North 2014*, Montreal, Canada, 28-30 May 2014.
 21. G. T. Reed, **G. Z. Mashanovich**, F. Y. Gardes, D. J. Thomson, Y. Hu, J. Soler-Penades, M. Nedeljkovic, A. Z. Khokhar, P. Thomas, C. Littlejohns, A. Ahmed, S. Reynolds, R. Topley, C. Mitchell, S. Stankovic, P. R. Wilson, L. Ke, T. M. Ben Masaud, A. Tarazona, H. M. H. Chong, "Silicon photonic devices for the near - and mid-infrared wavelength ranges," *Mediterranean Photonics Conference 2014*, Trani, Italy, 7-9 May 2014.
 22. G. T. Reed, **G. Z. Mashanovich**, F. Y. Gardes, D. J. Thomson, Y. Hu, J. Soler-Penades, M. Nedeljkovic, A. Khokhar, P. Thomas, C. Littlejohns, A. Ahmad, S. Reynolds, R. Topley, C. Mitchell, S. Stankovic, N. Owens, X. Chen, P. R. Wilson, L. Ke, T. Ben Masaud, A. Tarazona, H. M. H. Chong, "Recent results in Silicon Photonics at the University of Southampton," *Photonics West 2014*.
 23. G. T. Reed, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, Y. Hu, L. Ke, P. W. Wilson, L. Zimmermann, D. Knoll, S. Lischke, H. Porte, B. Goll, H. Zimmermann, S.-W. Chen, S. H. Hsu, J.-M. Fedeli, K. Debnath, L. O'Faolain, T. F. Krauss, M. Aamer, A. Brimont, P. Sanchis, A. Hakansson, "Silicon on insulator optical modulators for integration in photonic optical circuits," *Photonics West 2014*.
 24. G. Roelkens, U. Dave, A. Gassenq, N. Hattasan, C. Hu, B. Kuyken, F. Leo, A. Malik, M. Muneeb, E. Ryckeboer, S. Uvin, Z. Hens, R. Baets, Y. Shimura, F. Gencarelli, B. Vincent, R. Loo, J. Van Campenhout, L. Cerutti, J.-B. Rodriguez, E. Tournié, X. Chen, M. Nedeljkovic, **G. Mashanovich**, L. Shen, N. Healy, A. C. Peacock, X. Liu, R. Osgood, and W. Green, "Mid-IR heterogeneous silicon photonics," *SPIE Photonics West 2014*, San Francisco, California, USA, 1-6 February 2014.
 25. G. T. Reed, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, Y. Hu, K. Li, P. W. Wilson, L. Zimmermann, H. Porte, B. Goll, H. Zimmermann, D. Knoll, S. Lischke, S.-W. Chen, S. S. H. Hsu, J.-M. Fedeli, K. Debnath, T. F. Krauss, and L. O'Faolain, "Options for silicon based modulators," *Frontiers in Optics 2013*, Orlando, Florida, USA, 6-10 October 2013.
 26. G. T. Reed, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, Y. Hu, K. Li, P. W. Wilson, L. Zimmermann, H. Porte, B. Goll, H. Zimmermann, D. Knoll, S. Lischke, S.-W. Chen, S. S. H. Hsu, J.-M. Fedeli, K. Debnath, T. F. Krauss, and L. O'Faolain, "High speed silicon modulators for integrated transceivers," *SSDM 2013, International Conference on Solid State Devices and Materials*, Fukuoka, Japan, 24-27 September, 2013.
 27. M. Nedeljkovic, Y. Hu, A. Khokhar, X. Chen, J. Soler Penades, S. Stankovic, C. Mitchell, **G. Z. Mashanovich**, "Mid-infrared silicon photonic devices for sensing applications," *5th EOS Topical Meeting on Optical Microsystems*, Capri, Italy, 12-14 September 2013.
 28. M. Muneeb, X. Chen, E. Ryckeboer, A. Malik, **G. Z. Mashanovich**, G. Roelkens, "Silicon-on-insulator mid-infrared planar concave grating based (de)multiplexer," *IEEE Photonics Conference (IPC) 2013*, Bellevue, USA, 8-12 September 2013.
 29. D. J. Thomson, F. Y. Gardes, Y. Hu, **G. Mashanovich**, G. T. Reed, L. Zimmermann, D. Knoll, S. Lischke, H. Porte, B. Goll, H. Zimmermann, L. Ke, P. Wilson, S.-W. Chen, S. S. H. Hsu, G.-H. Duan, A. Le Liepvre, C. Jany, A. Accard, M. Lamponi, D. Make, F. Lelarge, S. Messaoudene, D. Bordel, J.-M. Fedeli, S. Keyvaninia, G. Roelkens and D. Van Thourhout, "Integration of high performance silicon optical modulators," *IEEE Group IV Photonics*, Seoul, Korea, 28-30 August 2013.

30. **G. Z. Mashanovich**, M. Nedeljkovic, X. Chen, J. Soler Penades, G. Madalinski, M. Muneeb, G. Roelkens, H. M. H. Chong, G. T. Reed, "Group IV photonics platforms for sensing applications," *PIERS 2013*, Stockholm, Sweden, 12-15 August 2013.
31. G. Roelkens, B. Kuyken, F. Leo, N. Hattasan, E. Ryckeboer, M. Muneeb, C. Hu, A. Malik, Z. Hens, R. Baets, Y. Shimura, F. Gencarelli, B. Vincent, R. Loo, P. Verheyen, G. Lepage, J. Van Campenhout, L. Cerutti, J.B. Rodriguez, E. Tournié, X. Chen, M. Nedeljkovic, **G. Z. Mashanovich**, X. Liu, R. Osgood, W. M. J. Green, "Long-wavelength III-V/silicon photonic integrated circuits," *Integrated Photonics Research, Silicon and Nano-Photonics (IPR)*, Rio Grande, Puerto Rico, 14-19 July 2013
32. G. T. Reed, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, Y. Hu, Li Ke, P. W. Wilson, L. Zimmermann, H. Porte, G. Bernhard, S.-W. Chen, S. S. H. Hsu, J.-M. Fedeli, K. Debnath, T. F. Krauss, L. O'Faolain, "Optical modulators in silicon photonics for a range of applications," *Photonics North*, Ottawa, Canada, 3-5 June 2013.
33. G. T. Reed, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, Y. Hu, Li Ke, P. W. Wilson, L. Zimmermann, H. Porte, B. Goll, H. Zimmermann, D. Knoll, S. Lischke, S.-W. Chen, S. S. H. Hsu, J.-M. Fedeli, K. Debnath, T. F. Krauss, L. O'Faolain, "Silicon optical modulators for integrated transceivers," *CLEO 2013*, San Jose, CA, USA, 9-14 June 2013.
34. **G. Z. Mashanovich**, M. Nedeljkovic, X. Chen, T. M. Ben Masaud, M. Muneeb, M. Strain, M. Sorel, T. F. Krauss, G. C. Roelkens, A. C. Peacock, H. M. H. Chong, G. T. Reed, "Group IV platforms for the mid-infrared," *SPIE Optics + Optoelectronics*, Prague, Czech Republic, 15-18 April 2013.
35. **G. Z. Mashanovich**, M. Nedeljkovic, M. M. Milosevic, Y. Hu, T. M. Ben Masaud, E. Jaberansary, X. Chen, M. Strain, M. Sorel, A. C. Peacock, H. M. H. Chong, G. T. Reed, "Mid-infrared photonics devices in SOI," *SPIE Photonics West*, San Francisco, USA, 2-7 February 2013.
36. **G. Z. Mashanovich**, M. Nedeljkovic, M. M. Milosevic, Y. Hu, T. M. Ben Masaud, E. Jaberansary, X. Chen, M. Strain, M. Sorel, A. C. Peacock, T. F. Krauss, H. M. H. Chong, G. T. Reed, "Mid-infrared silicon photonics devices," *Photonics Global Conference 2012*, Singapore, 13-16 December 2012.
37. **G. Z. Mashanovich**, M. Nedeljkovic, M. M. Milosevic, Y. Hu, F. Y. Gardes, D. J. Thomson, T.-B. Masaud, E. Jaberansary, H. M. H. Chong, R. Soref, G. T. Reed, "Group IV photonic devices for the mid-infrared," *SPIE Photonics Europe*, Brussels, Belgium, 16-19 April 2012.
38. **G. Z. Mashanovich**, M. M. Milosevic, M. Nedeljkovic, D. Cox, V. M. N. Passaro, H. M. H. Chong, and R. Soref, "Mid-infrared silicon photonics for sensing applications," *2012 MRS Spring Meeting*, San Francisco, 9-13 April 2012.
39. **G. Z. Mashanovich**, M. M. Milosevic, M. Nedeljkovic, N. Owens, W. R. Headley, E. J. Teo, B. Xiong, P. Yang, and Y. Hu, "Mid-infrared silicon photonic devices," *Proc. SPIE*, vol. 7943, 79430Q, 2011.
40. **G. Z. Mashanovich**, W. Headley, M. Milosevic, N. Owens, E. J. Teo, B. Q. Xiong, P. Y. Yang, M. Nedeljkovic, J. Anquita, I. Marko, and Y. Hu, "Waveguides for mid-IR group IV photonics," in *Proc. 7th IEEE Group IV Photonics Conference*, Beijing, China, 1-3 September 2010, paper FD1.
41. G. T. Reed, F. Y. Gardes, **G. Z. Mashanovich**, Y. Hu, and D. Thomson, "Recent developments of silicon optical modulators" *Integrated Photonics Research, Silicon and Nano Photonics (IPR)*, Monterey, California, USA, July 25-28, 2010.
42. G. T. Reed, N. Wright, **G. Z. Mashanovich**, B. Timotijevic, T. F. Krauss, T. P. White, L. O'Faolain, R. W. Kelsall, L. Lever, Z. Ikonik, A. Valavanis, D. Leadley, E. Findlayson, and R. M. Jenkins, "The UK Silicon Photonics Project", *Silicon Photonics and Photonic Integrated Circuits, Photonics Europe 2010, Proc. SPIE 7719*, Brussels, Belgium, 12 – 16 April, 2010.
43. G. T. Reed, D. J. Thomson, F. Y. Gardes, W. Headley, and **G. Z. Mashanovich**, "Optical modulators in silicon based on carrier depletion," *Photonics West 2010*, 23-28 January 2010, San Francisco, California, USA.
44. **G. Z. Mashanovich**, "Silicon photonic waveguides and devices," *Conference on Lasers and Electro-Optics (CLEO), CLEO 2009*, Baltimore, USA, 31 May – 5 June 2009.
45. G. T. Reed, **G. Mashanovich**, F. Y. Gardes, R. M. Gwilliam, N. M. Wright, D. J. Thomson, B. D. Timotijevic, K. L. Litvinenko, W. R. Headley, A. J. Smith, A. P. Knights, and J. H. B. Deane,

- "Silicon photonics in the UK," *SPIE Europe Microelectronics for the New Millenium*, 6-9 May 2009, Dresden, Germany.
46. F. Y. Gardes, G. T. Reed, A. P. Knights and **G. Z. Mashanovich**, "Evolution of optical modulators in silicon and novel ways of fabrication," *Photonics West 2008*, San Jose, CA, USA, January 2008, 6898-08.
 47. W. R. Headley, G. T. Reed, **G. Z. Mashanovich**, B. Timotijevic, F. Y. Gardes, D. Thomson, P. Y. Yang, E. J. Teo, D. J. Blackwood, M. B. H. Breese, A. A. Bettiol, and P. Waugh, "Future prospects for silicon photonics," *SPIE Europe Microtechnologies for the New Millennium*, Gran Canaria, Spain, 2-4 May, 2007.
 48. G. T. Reed, B. D. Timotijevic, F. Y. Gardes, **G. Z. Mashanovich**, W. R. Headley, and N. G. Emerson, "Waveguides and devices in silicon photonics: polarisation independence," *Proc. SPIE*, vol. 6476, 2007.
 49. G. T. Reed, **G. Z. Mashanovich**, B. D. Timotijevic, F. Y. Gardes, W. R. Headley, and N. Wright "Silicon photonic devices and polarisation independence," *Proc. MRS Fall Meeting 2006*, 27 Nov. – 1 Dec. 2006, Boston, USA, 0958-L02-01.
 50. **G. Z. Mashanovich** "Passive silicon photonics devices," UK-Canada Photonics Event, 31 October – 1 November 2006, London.
 51. G. T. Reed, F. Y. Gardes, B. D. Timotijevic, W. R. Headley, and **G. Z. Mashanovich**, "Tailoring the response of silicon photonics devices," *Proc. LEOS Annual Meeting*, 29/10–2/11 2006, Montreal, Canada, pp. 316-317.
 52. G. T. Reed, W. R. Headley, F. Y. Gardes, B. D. Timotijevic, S. P. Chan, and **G. Z. Mashanovich**, "Characteristics of rib waveguide racetrack resonators in SOI," *Proc. SPIE*, vol. 6183, 2006.
 53. G. T. Reed, **G. Z. Masanovic**, W. R. Headley, S. P. Chan, and B. Timotijevic, "Trends in silicon micro and nanophotonics," in *Proc. 11th Microoptics Conference, MOC'05*, 30 Oct – 2 Nov 2005, Tokyo, Japan.
 54. G. T. Reed, W. Headley, **G. Z. Masanovic**, C. E. Png, S. P. Chan, S. T. Lim, S. Howe, M. Paniccia, and A. Liu, "Performance and design issues associated with the trend to micro and nanophotonics," *Proc. SCI Conf.*, vol. 12, August 2004, Orlando, USA, pp. 203-208.
 55. G. T. Reed, W. Headley, S. P. Chan, **G. Z. Masanovic**, M. Paniccia, and A. Liu, "A polarisation independent ring resonator, and the need to couple to small SOI waveguides," *Workshop on Silicon based photonics*, McMaster University, Hamilton, Canada, 2004.
 56. G. T. Reed, C. E. Png, **G. Masanovic**, S. T. Lim, S. P. Chan, W. Headley, T. W. Ang, A. Liu, and M. Paniccia, "Silicon nanophotonic circuits," *Proc. XLVII ETRAN Conference*, vol. 4, June 2003, Herceg Novi, Montenegro, pp. 145-152.
 57. J. Radunovic, S. Petricevic, P. Mihailovic, **G. Masanovic**, S. Stankovic, and M. Barjaktarovic, "Optoelectronic measurement systems in power supply systems," *Proc. XLVII ETRAN Conference*, vol. 3, June 2003, Herceg Novi, Montenegro, pp. 363-368.

Conference Papers

2015 (13)

58. A. C. Peacock, L. Shen, N. Healy, C. J. Mitchell, J. Soler Penades, M. Nedeljkovic, and **G. Z. Mashanovich**, "Germanium-on-silicon platforms for nonlinear photonics in the mid-infrared," *IEEE Photonics Conference 2015*, Reston, Virginia, USA, 4-8 October 2015.
59. M. Nedeljkovic, A. V. Velasco, A. Z. Khokhar, A. Delâge, P. Cheben, and **G. Z. Mashanovich**, "Silicon-on-insulator spatial heterodyne spectrometer chip for the mid-infrared," *Group IV Photonics 2015*, Vancouver, Canada, 26-28 August 2015.
60. J. Soler Penades, M. Nedeljkovic, A. Z. Khokhar, A. Ortega Monux, G. Wanguermert Perez, R. Halir, P. Cheben and **G. Z. Mashanovich**, "Subwavelength cladding mid-infrared devices," *Group IV Photonics 2015*, Vancouver, Canada, 26-28 August 2015.
61. Y. Jung, D. J. Thomson, Y. Hu, J. Shim, F. Y. Gardes, **G. Z. Mashanovich**, K. Yu, J. S. Wilkinson, and G. T. Reed, "Wavelength division demultiplexer and integrated III-V semiconductor lasers on a silicon photonics platform with microbubble manipulation," *Group IV Photonics 2015*, Vancouver, Canada, 26-28 August 2015.

62. Alejandro Sánchez-Postigo, José Manuel Luque-González, Robert Halir, J. Gonzalo Wangüemert-Pérez, **Goran Z. Mashanovich**, Pavel Cheben, "Design of ultra-broadband multimode interference devices for the mid-infrared wavelength range (3 – 4 μm)," *9a Reunión Española de Optoelectrónica, OPTOEL'15*, Salamanca, Spain, 13-15 July 2015.
63. M. Feinaeugle, D. J. Heath, B. Mills, J. A. Grant-Jacob, **G. Z. Mashanovich**, and R. W. Eason, "Simultaneous patterning and deposition of thin films via femtosecond laser induced transfer using a digital micromirror device for spatial pulse shaping," *CLEO Europe 2015*, Munich, Germany, 21-25 June 2015.
64. J. Soler Penades, Y. Hu, M. Nedeljkovic, C. G. Littlejohns, A. Z. Khokhar, G. Roelkens, F. Y. Gardes, and **G. Z. Mashanovich**, "Angled MMI CWDM structure on Germanium on Silicon," *CLEO Europe 2015*, Munich, Germany, 21-25 June 2015.
65. L. Shen, N. Healy, C. J. Mitchell, J. S. Penades, M. Nedeljkovic, **G. Z. Mashanovich**, and A. C. Peacock, "All-optical modulation in germanium-on-silicon waveguides in the mid-infrared," *CLEO 2015*, San Jose, CA, USA, 10-15 May 2015.
66. M. Feinaeugle, D. J. Heath, B. Mills, J. A. Grant-Jacob, **G. Z. Mashanovich**, and R. W. Eason, "Femtosecond laser-induced patterned transfer of intact semiconductor and polymer thin films via a digital micromirror device," *LAMP2015, The 7th International Congress on Laser Advanced Materials Processing*, 26-29 May 2015, Fukuoka, Japan.
67. Alejandro Sánchez-Postigo, Alejandro Sánchez-Postigo, Juan Gonzalo Wangüemert-Pérez, Robert Halir, Alejandro Ortega-Moñux, Carlos A. Alonso Ramos, Íñigo Molina-Fernández, Jordi Soler Penadés, Milos Nedeljkovic, Goran Z. Mashanovich, and Pavel Cheben, "A sub-wavelength structured multimode interference coupler for the 3 – 4 μm mid-infrared band," *SPIE Optics + Optoelectronics*, Prague, Czech Republic, 13-16 April 2015, paper [9516-20].
68. M. Nedeljkovic, J. Soler Penades, A. Z. Khokhar, C. J. Mitchell, S. Stankovic, T. Bucio Dominguez, C. G. Littlejohns, F. Y. Gardes, **G. Z. Mashanovich**, "Grating coupled low loss Ge-on-Si waveguides and multimode interferometers for the mid-infrared," *OFC 2015*, LA, CA, USA, 22-26 March 2015.
69. **G. Z. Mashanovich**, "Electronic voting and just-in-time teaching," *New Technologies in Education 2015*, Belgrade, Serbia, 27-28 February 2015.
70. G. T. Reed, Y. Hu, D. J. Thomson, A. Z. Khokhar, S. Stanković, C. J. Mitchell, F. Y. Gardes, and **G. Z. Mashanovich**, "Fabrication error tolerant SOI WDM device using bidirectional angled multimode interferometers," *SPIE Photonics West 2015*, San Francisco, CA, USA, 7-15 February 2015.

2014 (11)

71. G. T. Reed, Y. Hu, D. J. Thomson, F. Y. Gardes, and **G. Z. Mashanovich**, "A robust and fabrication tolerant (de)multiplexer on the SOI platform," *Asia Communications and Photonics Conference (ACP) 2014*, 11-14 November 2014, Shanghai, China.
72. S. Li L. Shen, N. Healy, C. Mitchell, J. S. Penades, M. Nedeljkovic, **G. Z. Mashanovich**, and A. C. Peacock, "All-optical modulation and nonlinear absorption in germanium-on-silicon waveguides at 2 μm ," *Asia Communications and Photonics Conference (ACP) 2014*, 11-14 November 2014, Shanghai, China.
73. R. Topley, G. Martinez-Jimenez, L. O'Faolain, N. Healy, S. Mailis, D. J. Thomson, F. Y. Gardes, A. C. Peacock, D. N. R. Payne, **G. Z. Mashanovich**, G. T. Reed, "Temporary grating coupler structures using localised refractive index engineering," *Asia Communications and Photonics Conference (ACP) 2014*, 11-14 November 2014, Shanghai, China.
74. J. Soler Penades, C. Alonso-Ramos, A. Z. Khokhar, M. Nedeljkovic, L. A. Boodhoo, A. Ortega-Monux, I. Molina-Fernandez, P. Cheben, and **G. Z. Mashanovich**, "Suspended SOI waveguide with sub-wavelength grating cladding for mid-infrared," *IEEE Sensors 2014*, 2-5 November 2014, Valencia, Spain.
75. F. Y. Gardes, C. G. Littlejohns, T. Dominguez Bucio, J. Soler Penades, C. J. Mitchell, A. Z. Khokhar, G. T. Reed and **G. Z. Mashanovich**, "Ge on Si and SiGeOI for future photonic integrated systems," *E-MRS 2014 Fall Meeting*, Warsaw, Poland, 15-19 September, 2014.
76. C. G. Littlejohns, F. Y. Gardes, **G. Z. Mashanovich**, and G. T. Reed, "Silicon Diffusion Engineering in Rapid Melt Growth of Silicon-Germanium-on-Insulator," *2014 ECS and SMEQ*

Joint International Meeting, 5-10 October 2014, Cancun, Mexico. *ECS Trans.* 2014 64(6): 155-157; doi:10.1149/06406.0155ecst

77. C. G. Littlejohns, M. Nedeljkovic, **G. Z. Mashanovich**, Graham T. Reed, and Frederic Y. Gardes "Silicon-germanium composition engineering for next generation multilayer devices and systems," *IEEE Group IV Photonics*, 27-29 August 2014, Paris, France. (*postdeadline paper*)
78. F. Y. Gardes, C. G. Littlejohns, J. Soler Penades, C. J. Mitchell, A. Z. Khokhar, G. T. Reed and **G. Z. Mashanovich**, "Germanium for photonic applications," *ISTDM 2014*, Singapore, June 2014.
79. B. Troia, A. Z. Khokhar, M. Nedeljkovic, J. Soler Penades, V. M. N. Passaro, and **G. Z. Mashanovich**, "Design and fabrication of silicon cascade-coupled ring resonators operating in mid-infrared," *Fotonica 2014*, 12-14 May 2014, Naples, Italy.
80. Y. Hu, D. J. Thomson, F. Y. Gardes, **G. Z. Mashanovich**, and G. T. Reed, "The evolution of angled MMI structure on the SOI platform", Proc. SPIE 8990, 89900E, Silicon Photonics IX, Photonics West 2014," *SPIE Photonics West 2014*, 1-6 February 2014, San Francisco, CA, USA.
81. R. Topley, G. Martinez-Jimenez, L. O'Faolain, N. Healy, S. Mailis, D. J. Thomson, F. Y. Gardes, A. C. Peacock, D. N. R. Payne, **G. Z. Mashanovich**, G. T. Reed, "Erasable diffractive grating couplers for wafer scale testing in silicon on insulator," *SPIE Photonics West 2014*, 1-6 February 2014, San Francisco, CA, USA.

2013 (2)

82. D. J. Thomson, F. Y. Gardes, Y. Hu, **G. Z. Mashanovich**, G. T. Reed, L. Zimmermann, D. Knoll, S. Lischke, H. Porte, B. Goll, H. Zimmermann, L. Ke, P. Wilson, S-W. Chen, S. S. H. Hsu, G.-H. Duan, A. Le Liepvre, C. Jany, A. Accard, M. Lamponi, D. Make, F. Lelarge, S. Messaoudene, D. Bordel, J.-M. Fedeli, S. Keyvaninia, G. Roelkens and D. Van Thourhout, "Integration of high performance silicon optical modulators," *Group IV Photonics Conference*, Seoul, Korea, 28-30 August 2013.
83. Y. Hu, F. Y. Gardes, D. J. Thomson, **G. Z. Mashanovich** and G. T. Reed, "Interleaved angled MMI CWDM structure on the SOI platform," *10th Group IV Photonics*, Seoul, Korea, 28-30 August 2013.

2012 (13)

84. M. Nedeljkovic, M. M. Milošević, T. M. Ben Masaud, E. Jaberansary, C. Reimer, D. J. M. Stothard, T. F. Krauss, H. M. H. Chong, G. T. Reed, **G. Z. Mashanovich**, "SOI mid-infrared silicon photonics for the 3-4 um wavelength range," *OSA 96th Annual Meeting Frontiers in Optics 2012*, Rochester, New York, USA, 14-18 October 2012.
85. X. Chen, Z. Cheng, H.K. Tsang, **G. Z. Mashanovich**, and G.T. Reed, "Suspended membrane waveguide on silicon-on-insulator for mid-infrared wavelengths," *EOS Annual Meeting 2012*, Aberdeen, UK, 25-28 September 2012.
86. M. Nedeljkovic, M. M. Milosevic, T. M. Ben Masaud, E. Jaberansary, H. M. H. Chong, G. T. Reed, **G. Z. Mashanovich**, "Silicon devices for the 3-4 um wavelength range," *EOS Annual Meeting 2012*, Aberdeen, UK, 25-28 September 2012.
87. T. B. Masaud, A. T. Labrador, **G. Z. Mashanovich**, G. T. Reed and H. M. H. Chong, "Hot-wire chemical vapour deposition for integrated silicon waveguide devices," *EOS Annual Meeting 2012*, Aberdeen, UK, 25-28 September 2012.
88. R. Topley, R. Loiacono, G. Mashanovich, R. Gwilliam, S. J. Henley, G. Lulli, R. Feldesh, R. Jones, and G. T. Reed, "Post testing removal of amorphous silicon Bragg gratings," *EOS Annual Meeting 2012*, Aberdeen, UK, 25-28 September 2012.
89. M. Nedeljkovic, M. M. Milosevic, D. J. Thomson, Y. Hu, F. Y. Gardes, T.-B. Masaud, E. Jaberansary, H. M. H. Chong, D. Cox, R. Soref, N. G. Emerson, G. T. Reed, and **G. Z. Mashanovich**, "Group IV photonic devices and modulation predictions for mid-infrared applications," *Photon 12*, Durham, UK, 3-6 September 2012.
90. C. Reimer, M. Nedeljkovic, D. J. M. Stothard, **G. Z. Mashanovich**, and T. F. Krauss, "Mid-infrared photonic crystal waveguides in SOI," *Group IV Photonics*, San Diego, CA, USA, 29-31 August 2012.
91. D. J. Thomson, F. Y. Gardes, D. C. Cox, J.-M. Fedeli, **G. Z. Mashanovich**, and G. T. Reed, "An alignment tolerant high speed ring resonator based silicon optical modulator," *Group IV Photonics*, San Diego, CA, USA, 29-31 August 2012.

92. M. M. Milošević, M. Nedeljkovic, T. M. B. Masaud, E. Jaberansary, H. M. H. Chong, G. T. Reed, and **G. Z. Mashanovich**, "Submicron silicon waveguides and optical splitters for mid-infrared applications," *Group IV Photonics*, San Diego, CA, USA, 29-31 August 2012.
93. D. J. Thomson, M. Milosevic, D. C. Cox, F. Y. Gardes, M. Nedeljkovic, J.-M. Fedeli, **G. Z. Mashanovich**, and G. T. Reed, "Focused ion beam processing of active and passive silicon photonic devices," *ECIO 2012*, Barcelona, Spain, 16-20 April 2012.
94. D. J. Thomson, F. Y. Gardes, J.-M. Fedeli, S. Zlatanovic, Y. Hu, B. P.-P. Kuo, E. Myslivets, N. Alic, S. Radic, **G. Z. Mashanovich**, and G. T. Reed, "High data rate silicon optical modulator with self-aligned fabrication process," *OFC 2012*, Los Angeles, USA, 4-8 March 2012.
95. M. M. Milosevic, F. Y. Gardes, D. J. Thomson, **G. Z. Mashanovich**, "Temperature insensitive racetrack resonators for optical communication applications," *OFC 2012*, Los Angeles, USA, 4-8 March 2012.
96. M. Nedeljkovic, R. A. Soref, **G. Z. Mashanovich**, "Free-carrier electro-absorption and electro-refraction modulation in group IV materials at mid-infrared wavelengths" *SPIE Photonics West 2012*, San Francisco, USA, 21-26 January 2012.

2011 (7)

97. Y. Hu, R. M. Jenkins, F. Y. Gardes, E. D. Finlayson, **G. Z. Mashanovich**, and G. T. Reed, "MMI for wavelength filtering and WDM on the SOI platform," *Proc. IEEE Photonics Society Annual Meeting* (9-13 October 2011, Arlington, Virginia, USA) paper WZ5, pp 615-616, 2011.
98. M. M. Milošević, D. J. Thomson, X. Chen, D. Cox, and **G. Z. Mashanovich**, "Silicon waveguides for the 3-4 μm wavelength range," *8th IEEE Group IV Photonics conference*, London, UK, 14-16 September 2011, pp. 208-201. (DOI: 10.1109/GROUP4.2011.6053765)
99. Y. Hu, R. M. Jenkins, F. Y. Gardes, E. D. Finlayson, **G. Z. Mashanovich**, and G. T. Reed, "SOI Tilted In/Output Multimode Interferometer for Coarse Wavelength Division Mux/Demux," *8th IEEE Group IV Photonics conference*, London, UK, 14-16 September 2011, paper WC3.
100. R. Loiacono, R. Topley, A. Nakhybe, **G. Z. Mashanovich**, R. Gwilliam, G. Lulli, R. Feldesh, R. Jones, and G. T. Reed, "Very low energy implanted Bragg gratings in SOI for wafer scale testing applications," *8th IEEE Group IV Photonics conference*, London, UK, 14-16 September 2011, paper WC4.
101. R. Loiacono, G. T. Reed, **G. Z. Mashanovich**, R. M. Gwilliam, G. Lulli, R. Feldesh, and R. Jones, "Low energy silicon on insulator ion implanted gratings for optical wafer scale testing," *Proc. SPIE*, vol. 7943, 794310, 2011.
102. Y. Hu, F. Y. Gardes, **G. Z. Mashanovich**, and G. T. Reed, "SOI ring resonators with controllable MMI coupler sections," *Proc. SPIE*, vol. 7943, paper 794311, 2011.
103. Y. Hu, F. Y. Gardes, R. M. Jenkins, E. D. Finlayson, **G. Z. Mashanovich**, and G. T. Reed, "Design of SOI wavelength filter based on multiple MMI structures," *Proc. SPIE*, vol. 7943, paper 79430X, 2011.

2010 (3)

104. M. Milosevic, **G. Z. Mashanovich**, F. Y. Gardes, N. P. Owens, Y. Hu, A. P. Knights, N. G. Tarr, and G. T. Reed, "Athermal and low loss ridge silicon waveguides" *Photonics West 2010*, 23-28 January 2010, San Francisco, California, USA.
105. R. Loiacono, G. T. Reed, R. Gwilliam, **G. Z. Mashanovich**, W. Whelan-Curtin, G. Lulli, and R. Jones, "Germanium ion implanted Bragg gratings in silicon waveguides," *SPIE Photonics West 2010*, San Francisco, CA, USA, 23-28 January 2010.
106. N. Wright, A. Smith, K. Litvinenko, R. Gwilliam, **G. Z. Mashanovich**, and G. T. Reed, "Effects of annealing silicon ion irradiated rib waveguides with respect to free carrier lifetime," *SPIE Photonics West 2010*, San Francisco, CA, USA, 23-28 January 2010.

2009 (5)

107. N. P. Owens, **G. Z. Mashanovich**, and G. T. Reed, "Reflective optical switch in silicon-on-insulator," *IEEE Photonics in Switching conference*, Pisa, Italy, 15-19 September 2009.
108. M. M. Milosevic, F. Y. Gardes, A. P. Knights, N. G. Tarr, **G. Z. Mashanovich**, and G. T. Reed, "Low loss LOCOS waveguides for silicon photonics," in *Proc. Silicon Based Emission Technology (SiBET) 2009*, Manchester, UK, 14-17 June 2009.

109. T. Keca, P. Matavulj, and **G. Z. Mashanovich**, "Transfer functions for polarisation dependent racetrack resonator," *53rd ETRAN conference*, Serbia, Jun 2009.
110. N. M. Wright, D. J. Thomson, K. L. Litvinenko, W. R. Headley, A. J. Smith, A. P. Knights, J. H. B. Deane, F. Y. Gardes, **G. Z. Mashanovich**, R. Gwilliam, and G. T. Reed, "Free carrier lifetime modification in silicon," *Photonics West 2009*, San Jose, California, USA, January 2009.
111. S. Howe, W. R. Headley, D. C. Cox, **G. Z. Mashanovich**, D. J. Thomson, and G. T. Reed "Fabrication and tailoring of silicon photonic devices via focused ion beam," *Photonics West 2009*, San Jose, California, USA, January 2009.

2008 (6)

112. N. M. Wright, D. J. Thomson, F. Y. Gardes, W. R. Headley, A. J. Smith, A. P. Knights, K. L. Litvinenko, **G. Z. Mashanovich**, R. Gwilliam, and G. T. Reed, "Free carrier lifetime modification for silicon waveguide based devices", *5th IEEE/LEOS International Conference on Group IV Photonics*, Sorrento, Italy, 17-19 September 2008.
113. M. M. Milosevic, P. S. Matavulj, and **G. Z. Mashanovich**, "Interpolation of the zero-birefringent surface by use of Chebyshev polynomial," *Proc. 12th Serbian Mathematical Congress*, Novi Sad, Serbia, 28 August – 2 September 2008.
114. M. M. Milosevic, P. S. Matavulj, and **G. Z. Mashanovich**, "Polarization independent strained optical waveguides for near- and mid-infrared applications " *Proc. 52nd ETRAN Conf.*, Palic, Serbia, 8-12 June 2008 [MO5.6 (awarded paper)].
115. **G. Z. Mashanovich**, S. Stankovic, P. Y. Yang, E. J. Teo, F. Dell'Olio, V. M. N. Passaro, A. A. Bettiol, M. B. H. Breese, and G. T. Reed, "Silicon waveguides for mid-infrared wavelength region," *Photonics West 2008*, San Jose, CA, USA, January 2008, 6898-25.
116. F. Y. Gardes, G. T. Reed, A. P. Knights, **G. Mashanovich**, P. E. Jessop, L. Rowe, S. McFaul, D. Bruce, and N. G. Tarr, "Sub-micron optical waveguides for silicon photonics formed via Local Oxidation of Silicon (LOCOS)," *Photonics West 2008*, San Jose, CA, USA, January 2008, 6898-23. (citation 20)
117. E. J. Teo, A. A. Bettiol, M. B. H. Breese, P. Y. Yang, **G. Z. Mashanovich**, W. R. Headley, G. T. Reed and D. J. Blackwood, "An all-silicon channel waveguides fabricated using direct proton beam writing," *Photonics West 2008*, San Jose, CA, USA, January 2008, 6898-22.

2007 (11)

118. M. M. Milosevic, P. S. Matavulj, and **G. Z. Mashanovich**, "Single mode and polarization independence in strained silicon-on-insulator rib waveguides," *Proc. 6th Seminar for Young Researchers*, Belgrade, Serbia, 24-26, December 2007.
119. M. Milosevic, P. Matavulj and **G. Z. Mashanovich**, "Stress induced characteristics of silicon-on-insulator waveguides," *Proc. 15th Telecommunications Forum, TELFOR 2007*, Belgrade, Serbia, 20-22 November 2007, pp. 401-404.
120. S. Stankovic, B. Timotijevic, P. Y. Yang, E. J. Teo, J. Crnjanski, M. Milosevic, T. Keca, P. Matavulj, and **G. Z. Mashanovich**, "Silicon photonic waveguides for near- and mid-infrared regions", *International School and Conference on Optics and Optical Materials – ISCOM07*, Belgrade, Serbia, 3-7 September 2007.
121. F. Dell'Olio, V. M. N. Passaro and **G. Z. Mashanovich**, "Microracetrack coupled-resonator optical waveguides in silicon photonic wires," *2nd European Optical Society Topical Meeting - Optical Microsystems*, OμS'07, Capri, Italy, 30 September – 3 October 2007.
122. **G. Z. Mashanovich**, B. Patel, V. Nsengumuremyi, D. Thomson, S. Howe, W. R. Headley, V. M. N. Passaro, G. J. Ensell, and G. T. Reed, "Temperature dependence of grating-assisted coupling to small silicon waveguides," *Proc. 4th IEEE/LEOS International Conference on Group IV Photonics*, Tokyo, Japan, 19-21 September 2007, pp. 177-179.
123. D. Thomson, W. R. Headley, **G. Z. Mashanovich**, and G. T. Reed, "Integrated optical isolator," *4th IEEE/LEOS International Conference on Group IV Photonics*, Tokyo, Japan, 19-21 September 2007.
124. P. Y. Yang, S. Stankovic, J. Crnjanski, W. R. Headley, E. J. Teo, G. T. Reed, and **G. Z. Mashanovich**, "Silicon photonic waveguides for mid- and long-wave infrared regions,"

International Conference on Optical, Optoelectronic and Photonic Materials and Applications, ICOOPMA 2007, London, UK, 30 July – 3 August, 2007.

125. S. Stankovic, J. Crnjanski and **G. Z. Mashanovich**, "Hollow-core omnidirectional silicon photonics waveguides for mid-wave infrared spectrum," *51st ETRAN Conference*, Herceg Novi, Montenegro, 4-8 June 2007.
126. B. D. Timotijevic, D. Thomson, F. Y. Gardes, S. Howe, A. Michaeli, R. Jones, J. V. Crnjanski, V. M. N. Passaro, **G. Z. Mashanovich**, and G. T. Reed, "Tailoring the response and temperature characteristics of multiple serial-coupled resonators in silicon on insulator," *Proc. SPIE*, vol. 6477, 2007.
127. G. T. Reed, P. Y. Yang, W. R. Headley, P. M. Waugh, **G. Z. Mashanovich**, D. Thomson, R. M. Gwilliam, E. J. Teo, D. J. Blackwood, M. B. H. Breese, and A. A. Bettiol, "Novel fabrication techniques for silicon photonics," *Proc. SPIE*, vol. 6477, 2007.
128. D. Thomson, A. P. Knights, D. Walters, **G. Z. Mashanovich**, B. Timotijevic, F. Y. Gardes, and G. T. Reed, "High performance total internal reflection type optical switches in silicon-on-insulator," *Proc. SPIE*, vol. 6477, 2007.

2006 (9)

129. **G. Z. Mashanovich**, G. Pucker, C. Kompocholis, A. Lui, J. Crnjanski, S. Stankovic, V. M. N. Passaro, P. Matavulj, and G. T. Reed, "Omnidirectional silicon photonics waveguides," *Proc. 14th Telecommunications Forum, TELFOR 2006*, Belgrade, Serbia, 21-23 November 2006, pp. 357-360.
130. D. Thomson, G. T. Reed, F. Y. Gardes, **G. Z. Mashanovich**, and S. Howe, "Total internal reflection carrier injection based optical switch in SOI with carrier restriction," *3rd Int. Conf. Group IV Photonics, GFP 2006*, Ottawa, Canada, 13-15 September 2006, pp. 78-80.
131. B. D. Timotijevic, G. T. Reed, R. Jones, A. Michaeli, A. Liu, and **G. Z. Mashanovich**, "Small optical filters in silicon-on-insulator," *3rd Int. Conf. Group IV Photonics, GFP 2006*, Ottawa, Canada, 13-15 September 2006, pp. 25-27.
132. B. D. Timotijevic, G. T. Reed, R. Jones, A. Liu, A. Michaeli, and **G. Z. Mashanovich**, "Optical filters in silicon-on-insulator: design considerations for devices based upon strip and rib waveguides," *Proc. SPIE*, vol. 6350, 2006.
133. V. M. N. Passaro, F. De Leonardis, and **G. Z. Mashanovich**, "Coupling conditions for microgear resonators," in *Proc. 8th International Conference on Transparent Optical Networks, ICTON 2006*, Nottingham, UK, 18-22 June 2006, vol. 4, pp. 124-127.
134. **G. Z. Mashanovich**, V. M. N. Passaro, G. J. Ensell, F. Y. Gardes, and G. T. Reed, "Improved dual grating-assisted directional coupler for silicon nanophotonics," *Proc. 25th IEEE Conf. Microelectron. MIEL 2006*, Belgrade, Serbia, 14-17 May 2006, pp. 289-292.
135. V. M. N. Passaro, F. De Leonardis, and **G. Z. Mashanovich**, "Analysis of nonlinear effects in nanometer-scale silicon-on-insulator rib waveguides," *Proc. 25th IEEE Conf. Microelectron. MIEL 2006*, Belgrade, Serbia and, 14-17 May 2006, pp. 137-140.
136. F. De Leonardis, V. M. N. Passaro, and **G. Z. Mashanovich**, "Analysis of pulsed excitation in small silicon-on-insulator microring resonators," *Proc. 25th IEEE Conf. Microelectron. MIEL 2006*, Belgrade, Serbia, 14-17 May 2006, pp. 141-144.
137. G. T. Reed, W. R. Headley, S. P. Chan, **G. Z. Masanovic**, S. Howe, and D. Thomson, "Experimental evidence of modal properties using directional couplers in silicon-on-insulator," *Proc. SPIE*, vol. 6125, pp. 150-160, 2006.

2005 (3)

138. **G. Z. Masanovic**, G. T. Reed, V. M. N. Passaro, W. Headley, B. Timotijevic, R. Atta, G. Ensell, and A. G. R. Evans, "Efficient coupling from optical fibres to nanophotonic waveguides," *Proc. 10th European Conference on Networks & Optical Communications*, July 2005, London, pp. 123-130.
139. **G. Z. Masanovic**, G. T. Reed, V. M. N. Passaro, W. Headley, B. Timotijevic, R. Atta, G. Ensell, A. G. R. Evans, "An efficient coupler for silicon nano-photonics," *Proc. 12th ECIO 2005*, April 2005, Grenoble, France, pp. 430-433.

140. **G. Z. Masanovic**, G. T. Reed, V. M. N. Passaro, W. R. Headley, B. Timotijevic, R. M. H. Atta, M. R. Josey, G. J. Ensell, and A. G. R. Evans, "Preliminary experimental results of a dual grating-assisted directional coupler on SOI," *Proc. SPIE*, vol. 5730, pp. 173-180, 2005.

2004 (3)

141. **G. Z. Masanovic**, G. T. Reed, V. M. N. Passaro, W. Headley, M. R. Josey, G. J. Ensell, R. M. H. Atta, and A. G. R. Evans, "A grating based coupler for fibre to silicon waveguide excitation," *Proc. SPIE*, vol. 5451, pp. 381-392, 2004.
142. D. P. Keddie, A. P. Pritchard, P. D. Foote, I. J. Read, G. T. Reed, **G. Masanovic**, G. J. Ensell, A. G. R. Evans, R. M. H. Atta, P. Henderson, C. Staveley, and K. Jones, "Bragg gratings interrogation system using MEMS and optical circuits: part 2, component development," *Proc. SPIE*, vol. 5346, pp. 261-268, 2004.
143. G. T. Reed, **G. Z. Masanovic**, W. R. Headley, C. E. Png, S. P. Chan, S. T. Lim, V. M. N. Passaro, D. Hak, O. Cohen, and M. Panizza, "Small devices in SOI: fabrication and design issues," *Proc. SPIE*, vol. 5357, pp. 75-86, 2004.

2003 (3)

144. S. P. Chan, V. M. N. Passaro, S. T. Lim, C. E. Png, W. Headley, **G. Masanovic**, G. T. Reed, R. M. H. Atta, G. Ensell, A. G. R. Evans, "Characterisation of integrated Bragg gratings on silicon-on-insulator rib waveguide," *Proc. SPIE*, vol. 5248, pp. 273-283, 2003.
145. **G. Masanovic**, V. M. N. Passaro, and G. T. Reed, "Coupling optical fibres with thin semiconductor waveguides," *Proc. SPIE*, vol. 4997, pp. 171-180, 2003.
146. **G. Masanovic**, C. E. Png, V. M. N. Passaro, G. T. Reed, R. M. H. Atta, G. Ensell, and A. G. R. Evans, "Coupling from optical fibres to fast silicon modulators," *Proc. SPIE*, vol. 4998, pp. 65-75, 2003.

2002 (2)

147. C. E. Png, **G. Masanovic**, and G. T. Reed, "Coupling to 1 μ m silicon modulators," *Proc. SPIE*, vol. 4654, pp. 62-69, 2002.
148. G. T. Reed, C. E. Png, **G. Masanovic**, S. Chan, S. T. Lim, A. Vonsovici, A. G. R. Evans, R. Atta, S. M. Jackson, A. S. Way, and A. K. Kewell, "Fabrication and evaluation of SiC optical modulators," *Proc. SPIE*, vol. 4654, pp. 145-156, 2002.

Д. Приказ и оцена научног рада

Кандидат, др Горан Машановић, је публикувао преко 200 радова из области Силицијумске фотонице, са укупном цитираношћу 2100, од чега преко 60 у часописима са JCR листе од којих је више од пола публиковано у врхунским међународним часописима (IF већи од 3) а пет референци је цитирано, свака засебно, више од 50 пута (једна референца цитирана 585 пута). Такође, презентовао је преко 15 радова по позиву на еминентним светским конференцијама из области Фотонике. Према својим досадашњим резултатима спада у водеће светске научнике из области Силицијумске фотонице, посебно за средњу област инфрацрвеног дела спектра. Због врло високе оцене његовог досадашњег научног и наставног рада Катедра за Микроелектронику и техничку физику је предложила кандидата за гостујућег професора како би пренео своје знање и стечено искуство из области Силицијумске фотонице нашим колегама и студентима.

Ж. Оцена испуњености услова

Кандидат, др Горан Машановић, испуњава све услове из Закона о високом образовању (члан 66), Статута Универзитета у Београду (члан 134), Статута Електротехничког факултета Универзитета у Београду (чланови 17 и 102) као и Правилника о условима и начину ангажовања гостујућег професора на Универзитету у Београду (члан 3) за избор у звање гостујућег професора.

3. Закључак и предлог

На основу свега горе изнесеног јасно се види да кандидат, др Горан Машановић ванредни професор Универзитета у Саутхемптону, Велика Британија (Optoelectronics Research Centre, Faculty of Physical Sciences and Engineering, University of Southampton, UK), испуњава све законске предуслове дефинисане законским и подзаконским актима (секција Ж) за избор у звање гостујућег професора.

Др Горан Машановић има докторат наука из области Силицијумске фотонице, публиковао је више од 200 радова из исте области, има 2100 цитата, показао је завидне резултате у настави на матичном факултету као и научну препознатљивост из области Силицијумске фотонице на светском нивоу. Ови резултати су и условили да Катедра за микроелектронiku и техничку физику Електротехничког факултета Универзитета у Београду предложи кандидата др Горана Машановића за гостујућег професора за ужу научну област Физичка електроника.

Кандидат др Горан Машановић је бивши асистент на Катедри за микроелектронiku и техничку физику и од дана дипломирања стало сарађује са колегама са Катедре.

Полазећи од свеобухватне анализе научне, наставне и стручне активности др Горана Машановића, квалитета његовог научног рада, препознатљивости из области Силицијумске фотонице на светском нивоу и жеље за ангажовањем и несебичним преношењем свих знања колегама и студентима у Србији, Комисија предлаже Наставно-научном већу Електротехничког факултета Универзитета у Београду да др Горана Машановића изабере у звање гостујући професор.

У Београду, 24.08.2015.

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