



BOOM Publications

Journals:

1. L. Stampoulidis, K. Vyrsoinos, K. Voigt, L. Zimmermann, F. Gomez-Agis, H.J.S Dorren, Z. Sheng, D. Van Thourhout, L. Moerl, J. Kreissl, B. Sedighi, J. Scheytt, A. Pagano, E. Riccardi, "The European BOOM Project: Silicon Photonics for High- Capacity Optical Packet Routers", *JSTQE* **99**, 1-12, (2010).
2. L. Stampoulidis, D. Petrantonakis, C. Stamatiadis, E. Kehayas, P. Bakopoulos, Ch. Kouloumentas, P. Zakyntinos, K. Vyrsoinos, R. Dekker, E.J. Klein, "Micro-ring resonator assisted, all-optical wavelength conversion using a single SOA and a 2nd order Si₃N₄-SiO₂ ROADM," *JLT* **4**, 476-483, (2010).
3. Z. Sheng, Liu Liu, Joost Brouckaert, Sailing He, and Dries Van Thourhout, "InGaAs PIN photodetectors integrated on silicon-on-insulator waveguides," *Opt. Express* **18**, 1756-1761, (2010).
4. F. Gomez-Agis, O. Raz, S. J. Zhang, E. Tangdiongga, L. Zimmermann, K. Voigt, C. Vyrsoinos, L. Stampoulidis, and H. J. S. Dorren, "All-optical wavelength conversion at 160 Gbit/s using SOA and silicon on insulator photonic circuit", *Elect. Lett.*, **45**, 1132-1133, (2009).
5. F. Gomez-Agis, N. Calabretta, A. Albores-Mejia and H. J. S. Dorren, "Clock-distribution with Instantaneous Synchronisation for 160 Gb/s OTDM Packets Transmission", *Opt. Lett.*, **35**, 3255-3257, (2010).
6. F. Gomez-Agis, C. M. Okonkwo, A. Albores-Mejia, E. Tangdiongga and H. J. S. Dorren, "320-to-10 Gbit/s all-optical demultiplexing using sum-frequency generation in a PPLN waveguide", *Elect. Lett.*, **46**, 1008-1009, (2010).
7. L. Zimmermann, G.B. Preve, T. Tekin, T. Rosin, K. Landles, "Packaging and assembly for integrated photonics - a review of the ePIXpack photonics packaging platform", *JSTQE*, **17**, 645-651, (2011).
8. C. Stamatiadis, K. Vyrsoinos, L. Stampoulidis, I. Lazarou, B. Schrenk, A. Leinse, R. Heideman, C. Bruinink, E. J. Klein and Hercules Avramopoulos, "Fabrication and Experimental demonstration of a four-channel x 40Gb/s TriPlex all-optical wavelength conversion platform", *JLT*, **29**, 1886-1891, (2011).
9. C. Stamatiadis, K. Vyrsoinos, L. Stampoulidis, I. Lazarou, A. Maziotis, J. Bolten, M. Karl, T. Wahlbrink, P. De Heyn, Z. Sheng, D. Van Thourhout and Hercules Avramopoulos, "Silicon -on-insulator nanowire resonators for compact and ultra-high speed all-optical wavelength converters", *JLT*, **29**, 3054-3060, (2011).
10. J. Kreissl, C. Bornholdt, T. Gaertner, L. Moerl, G. Przyrembel, and W. Rehbein: "Flip-chip compatible electroabsorption modulator for up to 40 Gb/s, integrated with 1.55 μ m DFB laser and spot-size expander", *JSTQE*, **47**, 1036 – 1042, (2011).

Conferences:

1. L. Stampoulidis, "The European ICT-BOOM project: Photonic Tb/s routers made of silicon," in Proc. Photonic in Switching 2009, 15-19 Sep 2009, Pisa, Italy,
2. E. Kehayas, "Terabit-on-Chip: Enabling Ultra-high Capacity Photonic Networks," in Proc. ECOC 2009, 20-24 Sep 2009, paper 6.3.3.
3. L. Stampoulidis, C. Vysokinos, C. Stamatiadis, H. Avramopoulos, J. Kreissl, L. Mörl, D. Van Thourhout, J. Bolten, T. Wahlbrink, L. Zimmermann, K. Voigt, F. Gomez-Agis, E. Tangdionga, H. J. S. Dorren, C. Scheytt, R. Dekker, A. Pagano, E. Riccardi, "The BOOM project: A new Generation of Photonic Routing Subsystems using Hybrid Integration on Silicon-on-Insulator Waveguide boards", in Proc. SPIE Photonics Europe, 12-16 April 2010, Brussels
4. C. Stamatiadis, M. Bougioukos, A. Maziotis, P. Bakopoulos, L. Stampoulidis, and H. Avramopoulos, "All-Optical Contention Resolution Using a Single-Optical Flip-Flop And Two-Stage All-Optical Wavelength Conversion," OFC 2010, San Diego.
5. K. Vysokinos, L. Stampoulidis, Z. Sheng, E. Kehayas, P. Bakopoulos, D. Petrantonakis, C. Stamatiadis, Ch. Kouloumentas, P. Zakyntinos, R. Dekker, E.J. Klein, D.V. Thourhout, M.T. Korthorst, H. Avramopoulos, "High-order micro-ring resonator assisted wavelength converters for scalable and power efficient photonic routers," in Proc. ECOC 2009, Vienna Austria, paper P2.08.
6. Z. Sheng, L. Liu, J. Brouckaert, S. He, D. Van Thourhout and R. Baets, "Investigation of evanescent coupling between SOI waveguides and heterogeneously-integrated III-V pin photodetectors", 21st IEEE International Conference on Indium Phosphide & Related Materials, United States, p.159-162 (2009).
7. Z. Sheng, L. Liu, S. He, D. Van Thourhout, R. Baets, "Silicon-on-insulator microring resonator for ultra dense WDM applications" ,6th IEEE International Conference on Group IV Photonics, United States, p.ThP4 (2009)
8. L. Moerl: "SOAs and EMLs: Development of flip-chip compatible devices within BOOM", presentation at the European Semiconductor Workshop 2009 (ESLW 2009), Vienna, Austria, Sept. 25 – 26, 2009
9. Dries Van Thourhout, Tutorial Silicon Photonics, OFC 2010, San Diego (March 2010)
10. K. Voigt, L. Zimmermann, G. Winzer, T. Mitze, K. Petermann, J. Kreissl, E. Tangdionga, K.Vysokinos, L. Stampoulidis, "SOI platform for high speed all optical wavelength conversion" Proc. IEEE International Conference Group IV Photonics, pp. 101 – 103, 9-11 Sept. 2009, San Francisco
11. F. Gomez-Agis, C. M. Okonkwo, A. Albores-Mejia, E. Tangdionga and H. J. S. Dorren., "Ultra-fast all-optical demultiplexer for 320 Gbit/s serial data exploiting sum-frequency generation in a PPLN waveguide", ECOC 2010.
12. F. Gomez-Agis, N. Calabretta, A. Albores-Mejia, O. Raz, and H. J. S. Dorren., "160 Gbit/s packet clock distribution with instantaneous synchronization and low timing jitter", ECOC 2010.
13. K. Vysokinos, L. Stampoulidis, F. Gomez-Agis, K. Voigt, L. Zimmermann, T. Wahlbrink, S. Sheng, D.V. Thourhout, H.J.S. Dorren, "Ultra-high Speed, all-optical wavelength converters using single SOA and SOI photonic integrated circuits", IEEE Lasers and Electro Optics Society winter topical meeting, Mallorca, Spain, 10-13 Jan. 2010, Tech. Dig. WC2.

14. F. Gomez-Agis, C. M. Okonkwo, A. Albores-Mejia, E. Tangdiongga and H. J. S. Dorren, "Ultra-fast all-optical demultiplexer for 320 Gbit/s serial data exploiting sum-frequency generation in a PPLN waveguide", in ECOC, Torino, Italy, Sept. 19-23 2010, Paper We.7.E.2.
15. F. Gomez-Agis, N. Calabretta, A. Albores-Mejia, O. Raz, and H. J. S. Dorren., "160 Gbit/s packet clock distribution with instantaneous synchronization and low timing jitter", in ECOC, Torino, Italy, Sept. 19-23 2010, Paper P3.22.
16. L. Zimmermann, K. Voigt, G. Winzer, K. Landles, J. Lynn, S. Duffy, Packaging of SOI motherboards for high-speed all optical router applications, IEEE Group IV Photonics, Beijing, September 2010
17. L. Zimmermann, G.B. Preve, T. Tekin, T. Rosin, Packaging and assembly for integrated photonics - the ePIXpack photonics packaging service; IEEE Photonics Annual, Denver, Colorado, November 2010
18. A. Pagano, E. Riccardi, L. Stampoulidis, C. Stamatiadis, K. Vysokinos, L. Zimmermann, C. Scheytt, F. Gomez-Agis, H. Dorren, Z. Sheng, D. Van Thourhout, L. Moerl, J. Kreissl, T. Wahlbrink, A. Leinse, "The European ICT-BOOM project: Silicon photonic Tb/s routers," in Proc. FOTONICA 2010, Pisa, Italy, invited paper A4.1.
19. C. Stamatiadis, K. Vysokinos, L. Stampoulidis, A. Maziotis, Z. Sheng, D. Van Thourhout, J. Bolten, M. Karl, T. Wahlbrink and H. Avramopoulos, "All-Optical Wavelength Conversion at 160Gb/s Using an SOA and a 3rd Order SOI Nanowire Periodic Filter", IEEE Photonics Annual, Denver, Colorado, November 2010
20. C. Stamatiadis, I. Lazarou, L. Stampoulidis, K. Vysokinos, B. Schrenk, A. Leinse, R. Heideman, C. Bruinink, E. Klein and H. Avramopoulos, "4x40Gb/s All-Optical Wavelength Conversion using SOAs and integrated arrays of ring resonators and DIs", in Proc. OFC 2011, Los Angeles, (2011), OThY4.
21. L. Zimmermann, G.B. Preve, K. Voigt, G. Winzer, J. Kreissl, L. Moerl, C. Stamatiadis, L. Stampoulidis, H. Avramopoulos, "High-precision flip-chip technology for all-optical wavelength conversion using SOI photonic circuit", Group IV Photonics (GFP), 8th IEEE Int. Conf., London 2011
22. A. Pagano, E. Riccardi, C. Stamatiadis, L. Stampoulidis, K. Vysokinos and H. Avramopoulos, "The European ICT-BOOM project: silicon photonics Tb/s routers for improved energy efficiency in optical networks", in Proc. SPIE 2011
23. C. Stamatiadis, L. Stampoulidis, K. Vysokinos, I. Lazarou, L. Zimmermann, K. Voigt, L. Moerl, J. Kreissl, B Sedighi, Z. Sheng, P. De Heyn, D. Van Thourhout, M. Karl, T. Wahlbrink, J. Bolten, A. Leinse, R. Heideman, F. Gomez Agis, H. Dorren, A. Pagano, E. Riccardi and H. Avramopoulos, "The ICT-BOOM project: Photonic routing on a silicon-on-insulator hybrid platform," in Proc. ONDM 2011, Bologna, Italy, invited paper.
24. J. Kreissl, C. Bornholdt, T. Gaertner, L. Moerl, G. Przyrembel and W. Rehbein, "1550 nm Flip-chip compatible electroabsorption-modulated laser with 40Gb/s modulation capacity", IPRM 2011, Berlin, Germany
25. W. Bogaerts, P. De Heyn, T. Van Vaerenbergh, K. De Vos, S. Selvaraja, T. Claes, P. Dumon, P. Bienstman, D. Van Thourhout and R. Baets, "Silicon Microring Resonators", Lasers and Photonics Review, (invited), (2011)
26. P. De Heyn, B. Kuyken, D. Vermeulen, W. Bogaerts and D. Van Thourhout, "High-performance low-loss silicon-on-insulator microring resonators using TM-polarized light", in Proc. OFC 2011, (2011), OThV2.
27. L. Moerl, P. De Heyn and D. Van Thourhout, "Optical coupling of SOI waveguides and III-V photodetectors", French Symposium on Emerging Technologies for Micro-nanofabrication (invited), France, (2010)

28. P. De Heyn, B. Kuyken, D. Vermeulen, W. Bogaerts and D. Van Thourhout, "Improved intrinsic Q of Silicon-on-Insulator microring resonators using TM-polarized light", Proceedings of the 2010 Annual Symposium of the IEEE Photonics Benelux Chapter, Netherlands, 197-200 (2010)
29. G. Roelkens, D. Vermeulen, L. Liu, T. Spuesens, R. Kumar, P. Mechet, K. Huybrechts, S. Keyvaninia, S. Stankovic, M. Tassaert, P. De Heyn, K. Komorowska, S. Selvaraja, D. Van Thourhout, G. Morthier, R. Baets and R. Halir, "III-V/silicon photonic integrated circuits for FTTH and optical interconnect", IB2COM (invited), Spain, (2010).
30. D. Vermeulen, T. Spuesens, P. De Heyn, P. Mechet, R. Notzel, S. Verstuyft, D. Van Thourhout and G. Roelkens, "III-V/SOI photonic integrated circuit for FTTH central office transceivers in a PTP network configuration", ECOC, Italy, p.Tu.5.C.2 (2010) .