Bart J. Van Zeghbroeck, Professor

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Education:

Aug. 1984 **Ph.D**. in Electrical Engineering, University of Colorado at Boulder
Aug. 1981 **M.S.** in Electrical Engineering, University of Colorado at Boulder
July 1980 **Diploma** of Electrical Engineer, Katholieke Universiteit, Leuven, Belgium.

Professional Experience:

6/2000 – present **Professor,** University of Colorado at Boulder
5/2005 – present **Chief Executive Officer,** TrueNano, Inc.
7/2018 – 6/2022 **Associate Department Chair** for External Relations
9/2014 – 8/2016 **Chief Executive Officer,** BASiC 3C, Inc.
10/2012 – 7/2018 **Director,** Nanomaterials Characterization Facility (NCF)
3/2009 – 8/2015 **Director,** Colorado Nanofabrication Lab. (CNL), Member of the NNIN
7/2006 – 9/2006 **Director,** Boulder Advanced Technology Center, Microsemi Corp.
1/2002 – 8/2004 **Founder and Chief Technology Officer,** PowerSicel Inc.
9/2001 – 12/2001 **Managing Director of Research and Development,** Eagle R&D.
6/2001 – 2/2009 **Director,** Micro/Nano Research and Teaching Lab., Univ. of Colorado
5/1995 - 7/1995 **Visiting Professor**, University of Ulm, Germany.
1/1990 – 6/2000 **Associate Professor**, University of Colorado at Boulder.
Teaching in the area of thermodynamics, solid state physics, micro/nanofabrication, electronic and optoelectronic devices and circuits.
Research and scholarly interest in high-speed electronic, superconducting and optoelectronic devices and materials with emphasis on devices for optoelectronic optoelectronic integrated circuits, high-temperature electronics, power RF and power switching.
9/1984 - 12/1989 **Research staff Member**, IBM Zürich Research Laboratory, Switzerland.
6/1981 - 8/1984 **Research Assistant**, National Institute of Standards and Technology

Miscellaneous

- **IBM** first patent award, first and second invention award, research division award and outstanding technical achievement award.
- University of Colorado Doctoral **Fellowship**, 1981-1982
- **IEEE** senior member since 1999, member since 1977
- **DAAD** (Deutsche Academische Austausch Dienst) **fellowship recipient**, Summer 1995
- **Device Research Conference** General Conference Chair 1999, Technical Program Chair, 1998, Local arrangements Chair, 1991, 1994
- **CU TTO award recipient:** Physical Science Company of the year, PowerSicel 2005.
- **Reviewer for:** Solid State Electronics, IEEE Transactions on Electron Devices, Electronics Letters, IEEE Photonics Technology Letters, IEEE Transaction of Applied Superconductivity, Journal of Applied Physics, Applied Physics Letters, American Journal of Physics, Department of Energy, National Science Foundation, Science Foundation Ireland, National Science and Engineering Research Council, Canada University of New South Wales, Sidney, Australia
- **120 Publications, 22 patents**

Bart J. Van Zeghbroeck - Publication List

Peer-reviewed Journal Publications

1. B. J. Van Zeghbroeck, "Superconducting Current Injection Transistor", Appl. Phys. Lett., Vol. 42, No.8, pp 736-738 (1983).
2. P. Wolf, B. J. Van Zeghbroeck and U. Deutsch, "A Josephson Sampler with 2.1ps Resolution", IEEE Trans. Mag., Vol. MAG-21, No.2, pp 226-229 (1985).
3. B. J. Van Zeghbroeck, "Superconducting Current Injection Transistor with very high Critical-Current-Density Edge-Junctions", IEEE Trans. Mag., Vol. MAG-21, No.2, pp 916-919 (1985).
4. B. J. Van Zeghbroeck, "Model for a Josephson Sampling Gate", J. Appl. Phys., Vol. 57, No.7, pp 2593-2596 (1985).
5. B. J. Van Zeghbroeck, "Comment on 'Effect of Magnetic Field on n^+nn^+ GaAs Ballistic Diode'", Electr. Lett., Vol. 21, No.19, p 848 (1985).
6. H. Jäckel, V. Graf, B. J. Van Zeghbroeck, P. Vettiger, and P. Wolf, "Scaled GaAs MESFET's with Gate Length Down to 100nm", IEEE Electr. Dev. Lett., Vol. EDL-7, pp 522-524 (1986).
7. B. J. Van Zeghbroeck, W. Patrick, H. Meier, and P. Vettiger, "Submicrometer GaAs MESFET with Shallow Channel and Very High Transconductance", IEEE Electron Dev. Lett, Vol. EDL-8, pp 118-120 (1987).
8. B. J. Van Zeghbroeck, W. Patrick, H. Meier, and P. Vettiger, "Parasitic Bipolar Effects in Submicrometer GaAs MESFET's", IEEE Electron Dev. Lett, Vol. EDL-8, pp 188-190 (1987).
9. Ch. Harder, B. J. Van Zeghbroeck, H. Meier, W. Patrick, and P. Vettiger, "5.2 GHz Bandwidth Monolithic GaAs Optoelectronic Receiver", IEEE Electron Dev. Lett., EDL-8, pp 171-173, 1988.
10. B. J. Van Zeghbroeck, W. Patrick, J.-M. Halbout, and P. Vettiger, "105 GHz Bandwidth Metal-Semiconductor-Metal Photodiode", IEEE Electron Dev. Lett., EDL-10, pp 527-529, 1988.
11. B. J. Van Zeghbroeck, "Analysis of Picosecond and Subpicosecond MSM Photodiodes with Very Low Bias Voltage", IEEE Trans. Electr. Dev., Vol.35, p 2433, 1988.
12. P. Vettiger, P. Buchmann, K. Dätwyler, G. Sasso, and B. J. Van Zeghbroeck, "Nanometer sidewall lithography by resist silylation", J. Vac. Sci. Technol., Vol. B7, p 1756-1759, 1989.
13. Ch. S. Harder, B. J. Van Zeghbroeck, M. P. Kesler, H. P. Meier, P. Vettiger, D. J. Webb, and P. Wolf, "High-speed GaAs/AlGaAs optoelectronic devices for computer applications", IBM J. Res. Develop., Vol. 34, p 568-584, 1990.
14. T. N. Jackson, B. J. Van Zeghbroeck, G. Pepper, J. F. DeGelormo, T. Keuch, H. Meier, and P. Wolf, "Submicron-gate-length GaAs MESFETs", IBM J. Res. Develop., Vol. 34, p 495-505, 1990.
15. Y.B. Gigase, Ch.S. Harder, M.P. Kesler, H.P. Meier, and B.J. Van Zeghbroeck, "Threshold reduction through photon recycling in semiconductor lasers", Appl. Phys. Lett., Vol. 57, No. 13, p 1310-1312, Sept. 24. 1990.
16. B. J. Van Zeghbroeck, "Low-temperature behavior of short-channel GaAs MESFETs", Cryogenics Vol. 30, p 1084-1087, December 1990.

17. A.K. Chu, Y. Gigase and B. J. Van Zeghbroeck, "All-electronic laser diode characterization through integration with a photodiode", IEEE Trans. Electr. Dev., Vol.38, p 2700, 1991.
18. B. Van Zeghbroeck, "Optical data-communication between Josephson-junction circuits and room-temperature electronics", IEEE Trans. Applied Superconductivity, Vol.3, No.1, pp 2881-2884, 1993.
19. A.K. Chu, Y. Gigase, H.Y. Lee, M.J. Hafich, G.Y. Robinson and B. Van Zeghbroeck, "Fabrication and characterization of an InGaAs/InP Photon Transport Transistor", IEEE Photonics Technology Letters, Vol. 4, pp. 454-456, April 1993.
20. H.C. Lee and B. Van Zeghbroeck, "A Novel High-Speed Silicon MSM Photodetector Operated at 830 nm wavelength", IEEE Electron Device Letters, Vol EDL-16, p 175-177, May,1995.
21. J. Pankove, S.S. Chang, M. Leksono and B. Van Zeghbroeck, "High-Power High-Temperature Heterobipolar Transistor with Gallium Nitride Emitter", MRS Internet J. Nitride Semicond. Res., Vol. 1, 39, June 1996.
22. T. Sarto and B. Van Zeghbroeck, "Photocurrents in a Metal-Semiconductor-Metal Photodetector", IEEE Journal of Quantum Electronics, Vol. 22, p 2188-2194, Dec. 1997.
23. J.T. Torvik, M. Leksono, J. I. Pankove, B. Van Zeghbroeck, H. M. Ng and T.D. Moustakas, "Electrical characterization of GaN/SiC n-p heterojunction diodes", Appl. Phys. Lett., Vol. 72, p 1371 - 1373, Mar. 1998.
24. R. Waters and B. Van Zeghbroeck, "Fowler-Nordheim tunneling of holes through thermally SiO_2 on p^+ 6H-SiC", Applied Physics Letters, Vol. 73, pp 3692-3694, Dec 1998.
25. R. Waters, J. Patterson and B. Van Zeghbroeck, "Micro-Mechanical Optoelectronic Switch and Amplifier (MIMOSA)", J. Quantum Electr., Vol. 5, pp 33-35, Jan/Feb 1999.
26. J.T. Torvik, M. Leksono, J.I. Pankove, and B. Van Zeghbroeck, "A GaN/4H-SiC heterojunction bipolar transistor with operation up to 300°C", MRS Internet J. Nitride Semicond. Res., Vol. 4, 3, June 1999.
27. J.T. Torvik, J. I. Pankove, B. Van Zeghbroeck, "Comparison of GaN and 6H-SiC p-i-n photodetectors", ", IEEE Transactions on Electron Devices, Vol. 46, p 1326-1331, July 1999.
28. R. Waters and B. Van Zeghbroeck, "On Field Emission from a Semiconducting Substrate", Appl. Phys. Lett, Vol. 74, Oct 18, 1999.
29. R.L. Waters and B. Van Zeghbroeck, "Temperature-dependent tunneling through thermally grown SiO_2 on n-type 4H- and 6H-SiC", Appl. Phys. Lett, Vol. 76, No. 8, pp. 1039-1041, Feb. 21, 2000.
30. B. Van Zeghbroeck, S.S. Chang, R. Waters, J. Torvik and J. Pankove, "GaN/SiC HBT's and related issues", Solid State Electronics, Vol. 44, pp 265-270 February 2000.
31. J. Torvik, J.I. Pankove, M.W. Leksono, G. Eldridge and B. Van Zeghbroeck, "GaN/SiC Heterojunction Bipolar Transistors", Solid State Electronics, April 2000.
32. I. Perez-Wurfl, R. Krutsinger, J.T. Torvik and B. Van Zeghbroeck, 4H-SiC bipolar junction transistor with high current and power density, Solid State Electr., Vol. 47, 229-231, 2003.
33. I. Perez-Wurfl, J. Torvik, and B. Van Zeghbroeck, "Analysis of power dissipation and high temperature operation in 4H-SiC bipolar junction transistors with 4.9 MW/cm^2 power density handling ability", Material Science Forum 457-460: 1121-1124 Part 1&2 2004.

34. Zhao F, Perez I, Huang CF, Torvik J, Van Zeghbroeck B, "Analysis of transit times and minority carrier mobility in n-p-n 4H-SiC bipolar junction transistors", IEEE Trans. Electr. Dev. Vol 52 (12): 2541-2545 Dec. 2005.
35. Zhao F, Van Zeghbroeck B, Torvik K, et al., "Demonstration of long-pulse power amplification at 1 GHz using 4H-SiC RF BJTs on a conductive substrate", IEEE Electr. Dev. Lett. 28 (5): 398-400 May 2007.
36. A. Goulakov, F. Zhao, I. Perez, J. Torvik, and B. Van Zeghbroeck, "Optimized RIE process for high performance SiC BJTs", Journal of Applied Physics, V25-4, July-Aug, 2007.
37. W. McCarthy, C. Hawker, P. Ciszek, J. Bang, B. Van Zeghbroeck, T. Borsa, R. Powers, "Dial-a-size: precision quantum dot nanopatterning using cheap, off-the-shelf copolymers," Journal of Applied Polymer Science, Vol. 110, p. 3785-3794, Dec. 15, 2008.
38. T. Borsa, D. Williams, P. Hale and B. Van Zeghbroeck, "Novel Nano-structured Metal-Semiconductor-Metal Photodetector with High Peak Voltage", Jap. J. Appl. Phys., Vol. 48, Issue: 6, Special Issue: Part 2 Sp. , June 2009.
39. Marks, Z. D., Haygood, I. W.,Van Zeghbroeck, B., "Analysis of the GaAs/GaAsBi Material System for Heterojunction Bipolar Transistors", IEEE Transactions on Electron Devices, 27 November, 2012, DOI: 10.1109/TED.2012.2226592
40. Marks Z. D., Haygood I. W., Van Zeghbroeck B. Analysis of the GaAs/GaAsBi Material System for Heterojunction Bipolar Transistors. IEEE TRANSACTIONS ON ELECTRON DEVICES 60(1): 200-205 Jan 2013
41. Ou, Tzu Min, Tomoko Borsa, and Bart van Zeghbroeck. "Graphene-Silicon Heterojunction Infrared Photodiode at 1.3/1.55 μm." In Materials Science Forum, vol. 858, pp. 1153-1157. Trans Tech Publications, 2016.
42. Hens P, Brow R, Robinson H, Cromar M, Van Zeghbroeck B. "Epitaxial growth of cubic silicon carbide on silicon using hot filament chemical vapor deposition." THIN SOLID FILMS (9th International Conference on Hot Wire (Cat) and Initiated Chemical Vapor Deposition (HVWCD), September 06, 2016 - September 09, 2016): Elsevier Science SA, August 01, 2017.48-52.
43. Hens P, Brow R, Robinson H, Van Zeghbroeck B. "Hot Filament CVD epitaxy of 3C-SiC on 6H and 3C-SiC substrates." MRS ADVANCES. 2 (5) (January 01, 2017): 289-294.
44. T. Borsa, R. Brow, H. Robinson, and B. Van Zeghbroeck, "High-Contrast Visualization of Anti-Phase Domains and Screw Dislocations in 3C-SiC", Microsc. Microanal. Proceedings, (2017), 23, S1, 576 - 577, doi: 10.1017/S1431927617003567/7337/0576.pdf
45. Borsa, Tomoko, and Bart Van Zeghbroeck. "Electron/Ion Channeling Contrast Imaging and Grayscale Image Analysis Using 3C-SiC Twin Structures." Microscopy and Microanalysis 24.S1 (2018): 692-693.
46. Fardi H, van Zeghbroeck B. "Breakdown Field Model for 3C-SiC Power Device Simulations." Materials Science Forum. 924 (June 2018): 617-620. (Published online June 2018)
47. Van Zeghbroeck B, Robinson H, Brow RR. "Hot Filament CVD Growth of 4H-SiC Epitaxial Layers." Materials Science Forum. 924 (June 2018): 120-123. (Published online June 2018)
48. Van Zeghbroeck B, Fardi H. "Comparison of 3C-SiC and 4H-SiC Power MOSFETs." Materials Science Forum. 924 (June 2018): 774-777. (Published online June 2018)
49. B.J Van Zeghbroeck, T. Borsa, "Electron/Ion Channeling Contrast Imaging and Grayscale Image Analysis Using 3C-SiC Twin Structures." Microscopy and

Microanalysis, 24(S1), 692-693. (Microscopy & Microanalysis 2018), August 01, 2019.692-693. (Published online August 01, 2018)

50. Ford JC, Zakutayev A, Ndione PF, Sigdel AK, Widjonarko NE, Parilla PA, Van Zeghbroeck B, Berry JJ, Ginley DS, Perkins JD. "Opto-electronic properties of Co-Zn-Ni-O films deposited by RF-sputtering at ambient-temperature." Journal of Alloys and Compounds. 801 (September 2019): 409-414.
51. Fardi H, Van Zeghbroeck B. "Design and simulation of 3C-SiC vertical power MOSFETs." International Journal of Electronics (September 13, 2020): 1-17. (Published online September 13, 2020)
52. Van Zeghbroeck B, Brow R, Borsa T, Bobela D. "Analysis of Defect-Free Hot Filament CVD-Grown 3C-SiC." Materials Science Forum. 1004 (July 2020): 126-131. (Published online July 2020)
53. Van Zeghbroeck, Bart J., and David C. Bobela. "3C-SiC Island Growth on 4H-SiC Terraces: Statistical Evidence for the Orientation Selection Rule." *Solid State Phenomena* 344 (2023): 35-39.
54. Van Zeghbroeck, Bart J., Logan A. Howe, and Peter F. Hopkins. "Josephson sampler response using a binary search algorithm." *IEEE Transactions on Applied Superconductivity* 34, no. 3 (2024): 1-6.
55. Van Zeghbroeck, Bart J. "Switching Time Versus DC Current Overdrive of a Josephson Junction Sampler." *IEEE Transactions on Applied Superconductivity* 34, no. 3 (2024): 1-4.

Conference Proceedings

1. H. Jäckel, V. Graf, B. J. Van Zeghbroeck, P. Vettiger, and P. Wolf, "Ion-Implanted Submicron MESFET's with High Transconductance", Proc. International Symposium on Gallium Arsenide and Related Compounds, Las Vegas, 1986, pp 471-476.
2. B. J. Van Zeghbroeck, W. Patrick, H. Meier, P. Vettiger, and P. Wolf "High-Performance GaAs MESFET's", Proc. International Electron Devices Meeting, Los Angeles, pp 832-834, 1986.
3. W. Patrick, K. Dätwyler, B. J. Van Zeghbroeck, and P. Vettiger, "Technology for Submicron Recessed-Gate GaAs MESFETs on Thin MBE Layers using Electron Beam Lithography", Proc. 14th Intl. Conf. on GaAs and Related Compounds, Heraklion, Greece, 1987.
4. B. J. Van Zeghbroeck, Ch. Harder, J-M. Halbout, H. Jäckel, H. Meier, W. Patrick, P. Vettiger, and P. Wolf, "5.2GHz Monolithic GaAs Optoelectronic Receiver, High-Performance GaAs MESFET's", Proc. International Electron Devices Meeting, Washington, 1987, pp 229-232.
5. B. J. Van Zeghbroeck, "Analysis of Picosecond and Subpicosecond MSM Photodiodes with Very Low Bias Voltage", Proc. Device Research Conference, Boulder, 1988, p IIB-1.
6. B. J. Van Zeghbroeck, Ch. S. Harder, H. P. Meier and W. Walter, "Photon transport transistor", Proc. International Electron Device Meeting, Washington DC, p 543-546, 1989.
7. Y. Gigase, Ch. Harder, H. Meier and B. Van Zeghbroeck, "Threshold power reduction of GaAs-AlGaAs Ridge SQW-GRINSCH laser diodes through photon recycling", Proc. 12th IEEE international semiconductor laser conference, Davos Switzerland, Sept. 1990.
8. Y. Gigase, Ch. Harder and B. J. Van Zeghbroeck, "Monolithic optoelectronic circuit based on vertical integration of laser diodes and photodiodes", Late news paper at the

IEEE LEOS summer topical meeting on integrated optoelectronics, Monterey CA, July 1990.

9. A.K. Chu, Y. Gigase and B. Van Zeghbroeck, "Gain collapse in the photon transport transistor (PTT) above lasing threshold", Optical Society of America, Proc. Topical meeting on Picosecond Electronics and Optoelectronics, Salt Lake, Utah, March 13-15, 1991.
10. A.K. Chu, Y. Gigase and B. J. Van Zeghbroeck, "All-electronic laser diode characterization through integration with a photodiode", Proc. Device Research Conference, June 17-19, Boulder, CO 1991.
11. A.K. Chu, Y. Gigase, H.Y. Lee, M.J. Hafich, G.Y. Robinson and B. Van Zeghbroeck, "Fabrication and characterization of an InGaAs/InP Photon Transport Transistor", Proc. IEEE LEOS Summer topical meeting on Integrated Optoelectronics, pp79-80, Santa Barbara, CA, Aug. 1992.
12. D.J. Blumenthal, J.R. Sauer, H. Lee, and B. Van Zeghbroeck, "A Packet-rate real-time reconfigurable photonic switch for computer interconnects", Proc. IEEE LEOS Summer topical meeting on Optical Multiple Access Networks, pp11-12, Santa Barbara, CA, Aug. 1992.
13. B. Van Zeghbroeck, "Optical data-communication between Josephson-junction circuits and room-temperature electronics", Proc. Appl. Supercond. Conf, Chicago, August 1992.
14. H. F. Jordan, A. R. Michelson, B. Van Zeghbroeck and I. Januar, "An integrated Optics Stored Program Computer", Invited paper OFC1, Proc. Topical Meeting on Optical Computing, 1993.
15. H. C. Lee and B. Van Zeghbroeck, "Metal-Semiconductor-Metal Photodiodes on Textured Silicon Membranes", Proc. Device Research Conference, Paper VIA-2, Boulder, CO, June 1994.
16. H. C. Lee and B. Van Zeghbroeck, "Light Trapping Textured Silicon Membranes for Photonic Applications", Proc. Electronic Materials Conference, Paper AE3, Boulder, CO, June 1994.
17. J. Pankove, S. S. Chang, H. C. Lee , R. J. Molnar, T. D. Moustakas and B. Van Zeghbroeck, "High-Temperature GaN/SiC Heterojunction Bipolar Transistor with High Gain", Proc. International Electron Devices Meeting, p 389-392, San Francisco, CA, Dec. 1994.
18. S. S. Chang, J. Pankove, M. Leksono and B. Van Zeghbroeck, "500° C operation of a GaN/SiC Heterojunction Bipolar Transistor", Proc. Device Research Conf, Paper IVB-5, Charlottesville, VA, June 1995.
19. A.K. Chu, H.C. Lee and B. Van Zeghbroeck, "A Novel Multi-functional Optoelectronic Device for Large Scale Integration: a Detector, an Electronic Transistor and a Laser Diode in One", Proc. IEEE/LEOS 1995 Topical Meeting on RF Optoelectronics, Paper FB2, Keystone, CO, Aug. 1995.
20. J. Pankove, S.S. Chang, M. Leksono and B. Van Zeghbroeck., "High-Temperature High-Gain GaN/SiC HBTs", Proc. 1st European Gallium Nitride Workshop, Rigi, Switzerland, June 1996.
21. J. Patterson and B. Van Zeghbroeck, "Fabrication and Analysis of Si/SiO2 Micro-Mechanical Modulators", Proc. IEEE/LEOS 1996 Topical Meeting, Paper FA4, p 65-66, Keystone, CO, August 1996.
22. R. Waters and B. Van Zeghbroeck, "Fowler-Nordheim tunneling of holes through thermally SiO2 on p+ 6H-SiC", Proc. Electr. Materials Conf., Paper , Charlottesville, VA, June 1998.

23. R. Waters, J. Patterson and B. Van Zeghbroeck, "Micro-Mechanical Optoelectronic Switch and Amplifier (MIMOSA)", Proc. IEEE/LEOS 1998 Topical Meeting, Paper, p, Monterey, CA, July 1998.
24. J. Torvik, J.I. Pankove, M.W. Leksono, G. Eldridge and B. Van Zeghbroeck, "GaN/SiC Heterojunction Bipolar Transistors", Proc. Workshop on wide bandgap bipolar devices, Paper 2-2, Panama City Beach, January 1999.
25. B. Van Zeghbroeck, "GaN/SiC HBTs and related topics", Proc. Workshop on wide bandgap bipolar devices, Paper 2-6, Panama City Beach, January 1999.
26. 26. L.B. Rowland, G.T. Dunne, B. Van Zeghbroeck, J.T. Torvik and P.I. Pankove, "Materials challenges for p+ SiC-based GaN/SiC HBTs", Proc. Workshop on wide bandgap bipolar devices, Paper 2-6, Panama City Beach, January 1999.
27. R.L. Waters and B. Van Zeghbroeck, "Temperature dependence of the barrier height between SiO2 and 4H-SiC/6H-SiC", Proc. Electron. Materials Conference, Santa Barbara, CA, July, 1999.
28. I. Perez-Wurfl, R. Krutsinger, J. Torvik and B. Van Zeghbroeck, SiC bipolar transistors for RF applications, Proc. 2001 International Semiconductor Device Research Symposium, Dec. 5-7, 2001, Washington DC.
29. Shahid H. Bokhari, Matthew A. Glaser, Harry F. Jordan, Yves Lansac, Jon R. Sauer and Bart Van Zeghbroeck, "Parallelizing a DNA Simulation Code for the Cray MTA-2," IEEE Computer Society Bioinformatics Conference, Stanford University, Palo Alto, CA, August 14-16, 2002, pp. 291-302.
30. I. Perez-Wurfl, A. Konstantinov, J. Torvik and B. Van Zeghbroeck, RF 4H-SiC Bipolar Junction Transistors, Proceedings of the Lester Eastman Conference, Aug. 6-8, Newark, DE, 2002.
31. Jon R. Sauer, Shahid H. Bokhari, Mathew A. Glaser, Harry F. Jordan, Yves Lansac, Bart Van Zeghbroeck, "Computational Bionanotechnology", SIAM Conference on Computational Science and Engineering, February 10-13, 2003.
32. I. Perez, J. Torvik and B. Van Zeghbroeck, Proceedings Device Research Conference, Salt Lake City, June 2003.
33. I. Perez, J. Torvik and B. Van Zeghbroeck, Proceedings International Compound Semiconductor Conference and Related Material, Lyon, France, October 2003.
34. C-F. Huang, I. Perez, F. Zhao, J. Torvik, R. Irwin, K. Torvik, F. Abrhaley, and B. Van Zeghbroeck, "SiC Bipolar Transistors for 215 W UHF Power Amplification Operated in Pulsed Class A Mode", Proc. Device Research Conference, Notre Dame, June 2004.
35. I. Perez-Wurfl, A. Goulakov, E. E. King, J. T. Torvik, S. C. Witczak, F. Zhao and B. Van Zeghbroeck, "Functional lifetime testing of 4H-SiC bipolar transistors in harsh environments", Proc. European Conference of Silicon Carbide and Related Materials, Bologna, Italy, Sept. 2004.
36. F. Zhao, I. Perez-Wurfl, C-F. Huang, John Torvik, and Bart Van Zeghbroeck, "First Demonstration of 4H-SiC RF Bipolar Junction Transistors on a Semi-insulating Substrate with f_T/f_{MAX} of 7/5.2 GHz", Proc. MTT Conference, Long Beach, CA, June 2005.
37. I. Perez-Wurfl, F. Zhao, C-F. Huang, John Torvik, and Bart Van Zeghbroeck, "4H-SiC bipolar transistors with UHF and L-band operation", Proc. ICSCRM Conference, Pittsburg, PA, Sept. 2005.
38. Y. Wang, J. H. Lee, T. Borsa, W. Park and B. Van Zeghbroeck, "Photo-Response of Integrated Photonic Crystals-Photodiode Micro-Electro-Optic Filter", Proc. SPIE conference, San Diego, CA, July 2005.
39. F. Zhao, I. Perez, J. Torvik and B. Van Zeghbroeck, "UHF and L-band 4H-SiC RF bipolar transistors", National Radio Science Meeting, Boulder, CO, Jan 2006.

40. B. Van Zeghbroeck, I. Perez, F. Zhao and J. Torvik, "Technology development of 4H-SiC RF BJTs with 5GHz f_{MAX}", Proc. Mantech Conference, Vancouver, BC, April 2006.
41. F. Zhao, K. Torvik, J. Chu, M. Mallinger, J. Torvik, and B. Van Zeghbroeck, "Rugged UHF 4H-SiC BJTs with record 22.8 W/mm power density and 8.3 dB gain", Proc. DRC Conference, State College, PA, June 2006.
42. A. Goulakov, F. Zhao, I. Perez, J. Torvik, and B. Van Zeghbroeck, "Optimized RIE process for high performance SiC BJTs", Proc. EIBIN Conference, Phoenix, AZ, Sept. 2006.
43. F. Zhao, T. Shi, M. Mallinger, and B. Van Zeghbroeck, "4H-SiC RF BJTs with Long Pulse L-band Operation", Proc. DRC Conference, Paper III-3, South Bend IN, June 2007
44. T. Borsa and B. Van Zeghbroeck, "Novel nanofabricated MSM photodetector with high peak voltage", Proc. 2008 International Microprocessing and Nanotechnology Conference, p 38-39, Furuoka, Japan, Oct 27-30, 2008.
45. Borsa, T.; Van Zeghbroeck, B., "Fabrication of 4H-SiC cold field emitter arrays", 23rd International Vacuum Nanoelectronics Conference (IVNC), 2010, Palo Alto, CA, 26-30 July 2010, pp 102 - 103.
46. Marks, Z. Van Zeghbroeck, B., "High-speed nanoscale metal-semiconductor-metal photodetectors with terahertz bandwidth," 10th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD), 2010, Atlanta, GA, 6-9 Sept. 2010, pp 11 - 12.
47. Tomoko Borsa, Bart Van Zeghbroeck, "Self-aligned Process for SiC Power Devices," in Silicon Carbide 2010 — Materials, Processing, and Devices, edited by S.E. Saddow, E. Sanchez, F. Zhao, M. Dudley (Mater. Res. Soc. Symp. Proc. Volume 1246, Warrendale, PA, 2010), paper number 1246-B06-05.
48. Hamid Z. Fardi and Bart Van Zeghbroeck, "Modeling and simulation of AlGaAs/GaAs QW DBR silicon dual junction photovoltaic devices, Proc. SPIE 7597, 759723 (2010); doi:10.1117/12.842719 Monday 25 January 2010 San Francisco, California, USA
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