Talks and Conference Contributions

[1] A. Bergmann, N.I. Khan, J.A. Martos Calahorro, D. Wahl, and R. Michalzik, "Hybrid integration approach of VCSELs for miniaturized optical deflection of microparticles", *SPIE Photonics Europe, Semiconductor Lasers and Laser Dynamics V*, Brussels, Belgium, Apr. 2012.

[2] A. Bergmann, W. Schwarz, A.J. Márquez del Pino, D. Wahl, D. Rimpf, T. Mappes, and R. Michalzik, "Towards a laser-integrated module for marker-free sorting of micrometer-sized particles in microfluidic channels", *SPIE Photonics Europe, Biophotonics: Photonic Solutions for Better Health Care III*, Brussels, Belgium, Apr. 2012.

[3] A. Bergmann and R. Michalzik, "Miniaturized optical manipulation based on vertical-cavity laser diodes", poster at *Summer School 'Get Ahead With Optics'*, Hammamet-Yasmine, Tunisia, Sept. 2012.

[4] M. Caliebe, T. Meisch, M. Klein, P. Schustek, S. Schörner, and F. Scholz, "Epitaxy of semipolar $(11\bar{2}2)$ oriented GaN on structured sapphire substrates", *27th DGKK Workshop on Epitaxy of III-V Semiconductors*, Erlangen, Germany, Dec. 2012.

[5] M. Fikry, M. Madel, I. Tischer, R. Zeh, K. Thonke, and F. Scholz, "Epitaxial GaN around ZnO nanopillars", poster at *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[6] M. Fikry, Z. Ren, M. Madel, I. Tischer, K. Thonke, and F. Scholz, "Growth challenges and luminescence properties of coaxial GaN/InGaN/GaN heterostructures around ZnO nanopillars", poster at *XVI International Conference on Metal Organic Vapor Phase Epitaxy*, Busan, Korea, May 2012.

[7] K. Forghani, L. Schade, U.T. Schwarz, F. Lipski, O. Klein, U. Kaiser, and F. Scholz, "Relations between strain and defects in Si-doped (Al)GaN", *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[8] A. Hein, S. Menzel, and P. Unger, "High-power optically pumped semiconductor disk lasers for light generation in the green emission regime", *European Semiconductor Laser Workshop*, Brussels, Belgium, Sept. 2012.

[9] A. Hein, S. Menzel, and P. Unger, "High-power green-emitting OPSDLs using second-harmonic generation", *1st European Workshop on Vertical-External-Cavity Surface-Emitting Lasers*, Montpellier, France, Oct. 2012.

[10] D. Heinz, R.A.R. Leute, K. Thonke, F. Lipski, T. Meisch, T. Wunderer, I. Tischer, M. Hocker, and F. Scholz, "Photonic crystal slab based on nitride semiconductors", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[11] D. Heinz, R.A.R. Leute, S. Kizir, Y. Li, T. Meisch, J. Wang, T. Wunderer, K. Thonke, and F. Scholz, "Investigations on the dielectric properties of GaN layers

using integrated photonic crystals", *PolarCoN Summer School*, Kostenz, Germany, Sept. 2012.

[12] D. Heinz, R.A.R. Leute, T. Wunderer, Y. Li, T. Meisch, K. Thonke, and F. Scholz, "Engineering nitride based photonic crystal light emitters", *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[13] D. Heinz, R.A.R. Leute, T. Wunderer, Y. Li, T. Meisch, S. Kizir, K. Thonke, and F. Scholz, "Sub-micrometer GaN structures with semipolar quantum wells", seminar talk, *Arakawa & Iwamoto Laboratory, NanoQuine & IIS*, University of Tokyo, Tokyo, Japan, Oct. 2012.

[14] A. Kern, D. Wahl, and R. Michalzik, "VCSELs and monolithically integrated PIN photodiodes enabling a 10 Gbit/s bidirectional data link", *European Semiconductor Laser Workshop*, Brussels, Belgium, Sept. 2012.

[15] A. Kern, A. Al-Samaneh, D. Wahl, and R. Michalzik, "10 Gbit/s bidirectional multimode data link using monolithically integrated VCSEL–PIN transceiver devices", *38th Europ. Conf. on Opt. Commun., ECOC 2012*, Amsterdam, The Netherlands, Sept. 2012.

[16] M. Klein and F. Scholz, "Molybdenum as local growth inhibitor in ammonia based epitaxy processes", poster at *4th International Symposium on Growth of III-Nitrides, ISGN4*, St. Petersburg, Russia, July 2012.

[17] M. Klein, F. Lipski, F. Scholz, L. Hiller, M. Hocker, S. Bauer, B. Neuschl, I. Tischer, and K. Thonke, "The influence of prestrained templates on hydride vapor phase epitaxy", *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[18] R.A.R. Leute, D. Heinz, F. Lipski, T. Meisch, K. Forghani, J. Wang, K. Thonke, and F. Scholz, "Embedding submicrometer sized GaN stripes with semipolar quantum wells for application in light emitting diodes", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[19] R.A.R. Leute, D. Heinz, F. Lipski, T. Meisch, J. Wang, K. Thonke, and F. Scholz, "Realization of light emitting diodes based on embedded submicrometer sized stripes with semipolar QWs structured by laser interference lithography and grown by selective MOVPE", *XVI International Conference on Metal Organic Vapor Phase Epitaxy*, Busan, Korea, May 2012.

[20] R.A.R. Leute, D. Heinz, J. Wang, F. Lipski, T. Meisch, K. Thonke, J. Thalmair, J. Zweck, and F. Scholz, "Sub-micrometer GaN structures for application in semipolar LEDs", seminar talk, *Pohang University of Science and Technology (POSTECH)*, Pohang, Korea, May 2012.

[21] R.A.R. Leute, J. Wang, D. Heinz, T. Meisch, S. Kizir, F. Scholz, M. Hocker, M. Frey, K. Thonke, J. Biskupek, and U. Kaiser, "Submicrometer LED structures with semipolar quantum wells", *PolarCon Summer School*, Kostenz, Germany, Sept. 2012.

[22] R.A.R. Leute, S.S. Rahman, J. Wang, T. Meisch, M. Klein, K. Koyama, M. Ishii, H. Takeda, and F. Scholz, "Influence of surface morphology of free-standing HVPE grown GaN substrates on optoelectronics devices", *27th DGKK Workshop on Epitaxy of III-V Semiconductors*, Erlangen, Germany, Dec. 2012.

[23] T. Meisch, R.A.R. Leute, F. Lipski, I. Schwaiger, and F. Scholz, "MOVPE growth of $(10\bar{1}1)$ GaN on patterned sapphire wafers: influence of substrate miscut", *XVI International Conference on Metal Organic Vapor Phase Epitaxy*, Busan, Korea, May 2012.

[24] T. Meisch, S. Schörner, P. Schustek, J. Wang, R. Leute, and F. Scholz, "Growth of semipolar InGaN QWs on PSS", *PolarCon Summer School*, Kostenz, Germany, Sept. 2012.

[25] T. Meisch, R.A.R. Leute, F. Lipski, and F. Scholz, "Optimization studies on semipolar $(10\bar{1}1)$ GaN layers grown on 2" wafers", poster at *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[26] R. Michalzik, "Vertical-cavity lasers (VCSELs): en route to number one among the laser diodes" (in German), *Physics Colloquium*, University of Kaiserslautern, Kaiserslautern, Germany, Jan. 2012.

[27] R. Michalzik, A. Kern, and D. Wahl, "Bidirectional multimode fiber interconnection" (invited), *SPIE Photonics West 2012, Vertical-Cavity Surface-Emitting Lasers XVI*, San Francisco, CA, USA, Jan. 2012.

[28] R. Michalzik, "Development status and applications of surface-emitting semiconductor lasers (VCSELs)" (in German, invited), Optence Workshop *Nanostructures for Optics*, Kassel, Germany, Feb. 2012.

[29] R. Michalzik, "Vertical-cavity laser diodes (VCSELs): status and applications" (in German), *Seminar of DFG Collaborative Research Center 787*, TU Berlin, Berlin, Germany, Sept. 2012.

[30] S. Schörner, T. Meisch, and F. Scholz, "InGaN-Quantenfilme im grünen Wellenlängenbereich auf semipolarem GaN", *27th DGKK Workshop on Epitaxy of III-V Semiconductors*, Erlangen, Germany, Dec. 2012.

[31] F. Scholz, "Semipolare Nitrid-Strukturen: Effizientere Leuchtdioden?", *Zeiss-Optik-kolloquium*, Jena, Germany, Jan. 2012.

[32] F. Scholz, "High-Lights aus Ulm", seminar talk, *Osram Opto Semiconductors*, Regensburg, Germany, Jan. 2012.

[33] F. Scholz, K. Forghani, H. Qi, M. Gharavipour, M. Klein, O. Klein, U. Kaiser, B. Neuschl, K. Thonke, R. Gutt, and T. Passow, "Studies about defect reduction in AlGaN hetero structures", topical talk, *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[34] F. Scholz, "Group III nitrides: chances and challenges", seminar talk, *Siltronic*, Burghausen, Germany, June 2012.

[35] F. Scholz, T. Meisch, R. Leute, I. Argut, S. Schwaiger, I. Tischer, K. Thonke, S. Metzner, F. Bertram, J. Christen, H. Lengner, J. Thalmair, and S. Zweck, "Semipolar nitride hetero-structures on patterned substrates" (invited), *4th International Symposium on Growth of III-Nitrides, ISGN4*, St. Petersburg, Russia, July 2012.

[36] F. Scholz, D. Heinz, R.A.R. Leute, T. Meisch, Y. Li, T. Wunderer, and K. Thonke, "Sub-micrometer-nitride structures with semipolar quantum wells" (invited), *German-Japanese-Spanish Joint Workshop*, Berlin, Germany, July 2012.

[37] F. Scholz, K. Forghani, H. Qi, M. Gharavipour, M. Klein, O. Klein, U. Kaiser, B. Neuschl, I. Tischer, M. Feneberg, K. Thonke, S. Lazarev, S. Bauer, T. Baumbach, R. Gutt, and T. Passow, "Studies about defect reduction in AlGaN hetero-structures" (invited), *Annual Conference of Fraunhofer IISB*, Erlangen, Germany, Dec. 2012.

[38] J. Wang, I. Tischer, R.A.R. Leute, K. Thonke, and F. Scholz, "Facet control of GaN inverse pyramids grown by selective MOVPE", *XVI International Conference on Metal Organic Vapor Phase Epitaxy*, Busan, Korea, May 2012.

[39] J. Wang, D. Zhang, R.A.R. Leute, I. Tischer, M. Hocker, K. Thonke, and F. Scholz, "Semipolar green converters", *27th DGKK Workshop on Epitaxy of III-V Semiconductors*, Erlangen, Germany, Dec. 2012.

[40] B. Westenfelder, T. Amende, J. Biskupek, S. Kurasch, F. Scholz, and U. Kaiser, "In-situ TEM electrical and heat measurements exemplified on graphene membranes", poster at *26th International Winterschool on Electronic Properties of Novel Materials, IWEPNM 2012*, Kirchberg, Austria, Mar. 2012.

[41] B. Westenfelder, T. Amende, J. Biskupek, S. Kurasch, F. Scholz, and U. Kaiser, "In-situ HRTEM electrical experiments on graphene at high temperatures", *The 15th European Microscopy Congress, EMC2012*, Manchester, UK, Sept. 2012.

[42] B. Westenfelder, T. Amende, J. Biskupek, S. Kurasch, F. Scholz, and U. Kaiser, "In-situ HRTEM electrical investigations on graphene", *2012 MRS Fall Meeting & Exhibit*, MA, Boston, USA, Nov. 2012.

[43] J. Ahl, J. Hertkorn, A. Gomez-Iglesias, J. Bläsing, A. Krost, F. Bertram, J. Christen, K. Engl, B. Hahn, and F. Scholz, "Pulsed MOVPE of AlInGaN for integration as barrier layers in blue InGaN LEDs", poster at *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[44] S. Bauer, S. Lazarev, F. Scholz, K. Forghani, M. Barchuk, V. Holy, and T. Baumbach, "The use of high resolution synchrotron coplanar and non-coplanar diffraction for understanding the optimization of high quality AlGaN", *XVI International Conference on Metal Organic Vapor Phase Epitaxy*, Busan, Korea, May 2012.

[45] R. Boudot, X. Liu, E. Kroemer, P. Abbé, N. Passilly, S. Galliou, R.K. Chutani, V. Giordano, C. Gorecki, A. Al-Samaneh, D. Wahl, and R. Michalzik, "Characterization of compact CPT clocks based on a Cs-Ne microcell", poster at *2012 European Frequency and Time Forum, EFTF*, Gothenburg, Sweden, Apr. 2012.

[46] H. Bremers, H. Jönen, U. Rossow, S. Schwaiger, F. Scholz, and A. Hangleiter, "Determination of indium content in semipolar GaInN multiple quantum well samples using XRD", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[47] H. Bremers, H. Jönen, U. Rossow, S. Schwaiger, F. Scholz, S. Ploch, T. Wernike, M. Kneissl, and A. Hangleiter, "Determination of indium content in semipolar GaInN multiple quantum well samples using XRD", poster at *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[48] B. Fischer, A. Strodl, A. Hein, E. Wintner, and R. Michalzik, "VCSELs with two-sided beam emission for pressure sensor applications", in *SPIE Photonics Europe, Semiconductor Lasers and Laser Dynamics V*, Brussels, Belgium, Apr. 2012.

[49] R. Gutt, T. Passow, M. Kunzer, W. Pletschen, L. Kirste, K. Forghani, F. Scholz, K. Köhler, and J. Wagner, "High-efficiency AlGaN-based light-emitting diodes for the UV-A wavelength range", topical talk, *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[50] M. Hocker, I. Tischer, R.A.R. Leute, F. Scholz, and K. Thonke, "Low voltage spatially resolved cathodoluminescence measurements on nitride semiconductors", poster at *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[51] M. Madel, M. Fikry, I. Tischer, B. Neuschl, U. Röder, M. Feneberg, T. Meisch, F. Lipski, D. Heinz, M. Dickel, R.A.R. Leute, F. Scholz, and K. Thonke, "Patterned growth of ZnO nanopillars on GaN", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[52] S. Metzner, F. Bertram, H. Jönen, T. Langer, U. Rossow, A. Hangleiter, S. Schwaiger, F. Scholz, and J. Christen, "Cathodoluminescence study of InGaN quantum wells grown in different crystallographic orientations", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[53] T. Passow, R. Gutt, M. Kunzer, W. Pletschen, L. Kirste, K. Forghani, F. Scholz, K. Köhler, and J. Wagner, "High power efficiency AlGaN-based UV LEDs", poster at *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[54] C. Röder, F. Lipski, C. Himcinschi, J. Kortus, and F. Scholz, "Raman spectroscopic characterization of freestanding GaN layers", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[55] U. Röder, F. Lipski, M. Feneberg, F. Scholz, and K. Thonke, "Direct determination of piezoelectric coefficients for GaN by AFM", poster at *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[56] I. Tischer, M. Fikry, Z. Ren, M. Madel, M. Hocker, F. Scholz, and K. Thonke, "Optical properties of ZnO/GaN/InGaN core-shell nanorods", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.

[57] I. Tischer, K. Thonke, R.A.R. Leute, and F. Scholz, "Spatially resolved cathodoluminescence investigation of defects in semipolar AlGaN layers on GaN", poster at *International Workshop on Nitride Semiconductors IWN2012*, Sapporo, Japan, Oct. 2012.

[58] J. Zweck, M. Lohr, M. Jetter, C. Wächter, T. Wunderer, and F. Scholz, "Determination of piezoelectric fields in GaN/InGaN/GaN quantum wells by DPC", *DPG Spring Meeting*, Berlin, Germany, Mar. 2012.