

30TH NORTH AMERICAN MOLECULAR BEAM EPITAXY CONFERENCE (30TH NAMBE 2013)

InGaAs/GaAsSb based two-dimensional electron gases

Hermann Detz, Jonathan Silvano de Sousa, Horst Leonhardt, Pavel Klang, Tobias Zederbauer, Aaron Maxwell Andrews, Werner Schrenk, Jürgen Smoliner and Gottfried Strasser

J. Vac. Sci. Technol. B **32**, 02C104 (2014); <http://dx.doi.org/10.1116/1.4863299>

[+ VIEW DESCRIPTION](#)

Near infrared intersubband absorption of CdSe/MgSe quantum wells grown on InP substrate with an InAlAs buffer layer

Guopeng Chen, Kuaile Zhao, Maria C. Tamargo and Aidong Shen

J. Vac. Sci. Technol. B **32**, 02C105 (2014); <http://dx.doi.org/10.1116/1.4863496>

[+ VIEW DESCRIPTION](#)

Nanotemplate-directed InGaAs/GaAs single quantum dots: Toward addressable single photon emitter arrays

Jiefei Zhang, Zachary Lingley, Siyuan Lu and Anupam Madhukar

J. Vac. Sci. Technol. B **32**, 02C106 (2014); <http://dx.doi.org/10.1116/1.4863680>

[+ VIEW DESCRIPTION](#)

Semiempirical method of suppressing interference effects in photoluminescence spectra of GaN heterostructures

Yu-Li Wang, Kuan-Yu Chen, Wei-Chen Yang, Shao-Yen Chiu and Keh-Yung Cheng

J. Vac. Sci. Technol. B **32**, 02C107 (2014); <http://dx.doi.org/10.1116/1.4864054>

[+ VIEW DESCRIPTION](#)

MBE growth of P-doped 1.3 μm InAs quantum dot lasers on silicon

Alan Y. Liu, Chong Zhang, Andrew Snyder, Dmitri Lubyshev, Joel M. Fastenau, Amy W. K. Liu, Arthur C. Gossard and John E. Bowers

J. Vac. Sci. Technol. B **32**, 02C108 (2014); <http://dx.doi.org/10.1116/1.4864148>

[+ VIEW DESCRIPTION](#)

Optimum growth window for InAs/GaInSb superlattice materials tailored for very long wavelength infrared detection

Heather J. Haugan, Gail J. Brown, Krishnamurthy Mahalingam, Larry Grazulis, Gary T. Noe, Nathan E. Ogden and Junichiro Kono

J. Vac. Sci. Technol. B **32**, 02C109 (2014); <http://dx.doi.org/10.1116/1.4864746>

[+ VIEW DESCRIPTION](#)

Effect of surface states on the electrical properties of MBE grown modulation doped AlGaAs/GaAs

Alejandro Cisneros-de-la-Rosa, Irving Eduardo Cortes-Mestizo, Esteban Cruz-Hernández, Víctor Hugo Méndez-García, Luis Zamora-Peredo, José Vulfrano González-Fernández, Raúl Balderas-Navarro, Andrei Yu. Gorbachev and Máximo López-López

J. Vac. Sci. Technol. B **32**, 02C110 (2014); <http://dx.doi.org/10.1116/1.4863677>

[+ VIEW DESCRIPTION](#)

Selectively grown GaAs nanodisks on Si(100) by molecular beam epitaxy

Chia-Pu Chu, Shamsul Arafin, Guan Huang, Tianxiao Nie, Kang L. Wang, Yong Wang, Jin Zou, Syed M. Qasim and Mohammed S. BenSaleh

J. Vac. Sci. Technol. B **32**, 02C111 (2014); <http://dx.doi.org/10.1116/1.4865477>

[+ VIEW DESCRIPTION](#)

AlGaN cladding-free 482 nm continuous wave nitride laser diodes grown by plasma-assisted molecular beam epitaxy

Czesław Skierbiszewski, Henryk Turski, Grzegorz Muziol, Paweł Wolny, Grzegorz Cywiński, Szymon Grzanka, Julita Smalc-Koziorowska, Marta Sawicka, Piotr Perlin, Zbig R. Wasilewski and Sylwester Porowski

J. Vac. Sci. Technol. B **32**, 02C112 (2014); <http://dx.doi.org/10.1116/1.4865478>

[+ VIEW DESCRIPTION](#)

Engineering the color rendering index of phosphor-free InGaN(AI)GaN nanowire white light emitting diodes grown by molecular beam epitaxy

Ashfiqua T. Connie, Hieu P. T. Nguyen, Sharif M. Sadaf, Ishiang Shih and Zetian Mi

J. Vac. Sci. Technol. B **32**, 02C113 (2014); <http://dx.doi.org/10.1116/1.4865914>

[+ VIEW DESCRIPTION](#)

Study on the coalescence of dislocation-free GaN nanowires on Si and SiO_x

Shizhao Fan, Songrui Zhao, Xuedong Liu and Zetian Mi

J. Vac. Sci. Technol. B **32**, 02C114 (2014); <http://dx.doi.org/10.1116/1.4865915>

[+ VIEW DESCRIPTION](#)

Semipolar (2021) GaN laser diodes operating at 388 nm grown by plasma-assisted molecular beam epitaxy

Marta Sawicka, Grzegorz Muziol, Henryk Turski, Anna Feduniewicz-Żmuda, Marcin Kryśko, Szymon Grzanka, Ewa Grzanka, Julita Smalc-Koziorowska, Martin Albrecht, Robert Kucharski, Piotr Perlin and Czesław Skierbiszewski

J. Vac. Sci. Technol. B **32**, 02C115 (2014); <http://dx.doi.org/10.1116/1.4865913>

[+ VIEW DESCRIPTION](#)

High electron mobility in InSb epilayers and quantum wells grown with AlSb nucleation on Ge-on-insulator substrates

Mukul C. Debnath, Tetsuya D. Mishima, Michael B. Santos, Lucas C. Phinney, Terry D. Golding and Khalid Hossain

J. Vac. Sci. Technol. B **32**, 02C116 (2014); <http://dx.doi.org/10.1116/1.4866397>

[+ VIEW DESCRIPTION](#)

Silicon nitride thin films deposited using electron-beam evaporation in an RF plasma MBE system

D. Scott Katzer, David J. Meyer, David F. Storm, Neeraj Nepal and Virginia D. Wheeler

J. Vac. Sci. Technol. B **32**, 02C117 (2014); <http://dx.doi.org/10.1116/1.4867435>

+ VIEW DESCRIPTION

Orientation-dependent pseudomorphic growth of InAs for use in lattice-mismatched mid-infrared photonic structures

Charles Meyer, Emily Cheng and Gregory Triplett

J. Vac. Sci. Technol. B **32**, 02C118 (2014); <http://dx.doi.org/10.1116/1.4867879>

+ VIEW DESCRIPTION

Rapid thermal annealing effect on GaAsBi/GaAs single quantum wells grown by molecular beam epitaxy

Perry C. Grant, Dongsheng Fan, Aboozar Mosleh, Shui-Qing Yu, Vitaliy G. Dorogan, Michael E. Hawkridge, Yuriy I. Mazur, Mourad Benamara, Gregory J. Salamo and Shane R. Johnson

J. Vac. Sci. Technol. B **32**, 02C119 (2014); <http://dx.doi.org/10.1116/1.4868110>

+ VIEW DESCRIPTION

Molecular beam epitaxy using bismuth as a constituent in InAs and a surfactant in InAs/InAsSb superlattices

Preston T. Webster, Nathaniel A. Riordan, Chaturvedi Gogineni, Shi Liu, Jing Lu, Xin-Hao Zhao, David J. Smith, Yong-Hang Zhang and Shane R. Johnson

J. Vac. Sci. Technol. B **32**, 02C120 (2014); <http://dx.doi.org/10.1116/1.4868111>

+ VIEW DESCRIPTION

Studying the formation of nitrogen δ -doped layers on GaAs(001) using reflection high-energy electron diffraction

Norihisa Nishimoto, Masahiko Kondow and Fumitaro Ishikawa

J. Vac. Sci. Technol. B **32**, 02C121 (2014); <http://dx.doi.org/10.1116/1.4868522>

+ VIEW DESCRIPTION

NANOMETER SCIENCE & TECHNOLOGY

Spurious dangling bond formation during atomically precise hydrogen depassivation lithography on Si(100): The role of liberated hydrogen

Joshua B. Ballard, James H. G. Owen, Justin D. Alexander, William R. Owen, Ehud Fuchs, John N. Randall, Roberto C. Longo and Kyeongjae Cho

J. Vac. Sci. Technol. B **32**, 021805 (2014); <http://dx.doi.org/10.1116/1.4864302>

[+ VIEW DESCRIPTION](#)

Patterning of silicon nitride for CMOS gate spacer technology. II. Impact of subsilicon surface carbon implantation on epitaxial regrowth

Romuald Blanc, Cécile Jenny, Sébastien Lagrasta, François Leverd and Olivier Joubert

J. Vac. Sci. Technol. B **32**, 021806 (2014); <http://dx.doi.org/10.1116/1.4865896>

[+ VIEW DESCRIPTION](#)

Patterning of silicon nitride for CMOS gate spacer technology. III. Investigation of synchronously pulsed CH₃F/O₂/He plasmas

Romuald Blanc, François Leverd, Maxime Darnon, Gilles Cunge, Sylvain David and Olivier Joubert

J. Vac. Sci. Technol. B **32**, 021807 (2014); <http://dx.doi.org/10.1116/1.4867357>

[+ VIEW DESCRIPTION](#)

Enhanced field emission from hydrogenated SnO₂ nanoparticles embedded in TiO₂ film on fluorinated tin oxide substrate

Xu-Qiang Zhang, Jian-Biao Chen, Wei-Dong Zhu and Cheng-Wei Wang

J. Vac. Sci. Technol. B **32**, 021808 (2014); <http://dx.doi.org/10.1116/1.4867885>

[+ VIEW DESCRIPTION](#)

Fabrication of polymer antireflection structures by injection molding using ordered anodic porous alumina mold

Takashi Yanagishita, Mikio Masui, Naoto Ikegawa and Hideki Masuda

J. Vac. Sci. Technol. B **32**, 021809 (2014); <http://dx.doi.org/10.1116/1.4868030>

[+ VIEW DESCRIPTION](#)

MICROELECTRONIC & NANOELECTRONIC DEVICES

Theoretical and practical approach to overcome curvature radius limitation of conductive atomic force microscopy tip for imaging of advanced technological node static random access memory devices

Tsu Hau Ng, Sabitha James, Mohammed Khalid Bin Dawood, Hao Tan, Yamin Huang, Pariyathu Salimon Limin, Pik Kee Tan, Jeffrey Chor Keung Lam and Zhihong Mai

J. Vac. Sci. Technol. B **32**, 022201 (2014); <http://dx.doi.org/10.1116/1.4863962>

[+ VIEW DESCRIPTION](#)

Study on the effects of proton irradiation on the dc characteristics of AlGaIn/GaN high

electron mobility transistors with source field plate

Lu Liu, Ya-Hsi Hwang, Yuyin Xi, Fan Ren, Valentin Craciun, Stephen J.

Pearson, Gwangseok Yang, Hong-Yeol Kim and Jihyun Kim

J. Vac. Sci. Technol. B **32**, 022202 (2014); <http://dx.doi.org/10.1116/1.4866401>[+ VIEW DESCRIPTION](#)**Systematic procedure to optimize chamber seasoning conditions with optical emission spectroscopy in plasma etching**

Kye Hyun Baek, Sang Wook Park, Geum Jung Seong, Gyung Jin Min, Gilhyeun Choi, Ho-

Kyu Kang, Eun Seung Jung, Chonghun Han and Thomas F. Edgar

J. Vac. Sci. Technol. B **32**, 022203 (2014); <http://dx.doi.org/10.1116/1.4865909>[+ VIEW DESCRIPTION](#)**Contamination mitigation of hydrogen silsesquioxane resist processed with Na⁺-containing developer for nanoscale CMOS device patterning**

Markus Brink, Isaac Lauer, Sebastian U. Engelmann, Amlan Majumdar, Stephan A.

Cohen, Ernst Kratschmer and Michael A. Guillorn

J. Vac. Sci. Technol. B **32**, 022204 (2014); <http://dx.doi.org/10.1116/1.4867653>[+ VIEW DESCRIPTION](#)**26TH INTERNATIONAL VACUUM NANO-ELECTRONICS CONFERENCE (26TH IVNC 2013)****Field emission study of change in work function of poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) film**

Ying Jie Xing, Min Fang Qian, Jing Fang Qin and Geng Min Zhang

J. Vac. Sci. Technol. B **32**, 02B101 (2014); <http://dx.doi.org/10.1116/1.4827635>[+ VIEW DESCRIPTION](#)**Synthesis of cubic boron nitride films on Si tips via chemical vapor deposition and the field emission properties**

Masanori Kobayashi, Hidetoshi Miyashita, Naoki Inomata and Takahito Ono

J. Vac. Sci. Technol. B **32**, 02B102 (2014); <http://dx.doi.org/10.1116/1.4843075>[+ VIEW DESCRIPTION](#)**Picosecond electrical switching of single-gate metal nanotip arrays**

Soichiro Tsujino and Martin Paraliiev

J. Vac. Sci. Technol. B **32**, 02B103 (2014); <http://dx.doi.org/10.1116/1.4838295>[+ VIEW DESCRIPTION](#)**Influence of the emitted electron energy distribution from nanocathodes upon the current-voltage characteristics**

Anatoliiy Evtukh, Anton Grygoriev, Volodymyr Litovchenko, Olga Steblova, Oktay

Yilmazoglu, Hans L. Hartnagel and Hidenori Mimura

J. Vac. Sci. Technol. B **32**, 02B104 (2014); <http://dx.doi.org/10.1116/1.4843715>[+ VIEW DESCRIPTION](#)

CMOS field emission devices based on {111} silicon surfaces

Michael Bachmann, Andreas Pahlke, Carolin Axt, Bastian Hinze and Walter Hansch
J. Vac. Sci. Technol. B **32**, 02B105 (2014); <http://dx.doi.org/10.1116/1.4860953>

[+ VIEW DESCRIPTION](#)

HfC(310) high brightness sources for advanced imaging applications

William A. Mackie, Josh M. Lovell, Todd W. Curtis and Gerald G. Magera
J. Vac. Sci. Technol. B **32**, 02B106 (2014); <http://dx.doi.org/10.1116/1.4862444>

[+ VIEW DESCRIPTION](#)

Lateral distribution of field-emitted electrons from a carbon nanofiber array: A theoretical calculation

Stylianos Siontas, Andreas Kyritsakis, John P. Xanthakis, Stefano Iacobucci and Gianni Stefani
J. Vac. Sci. Technol. B **32**, 02B107 (2014); <http://dx.doi.org/10.1116/1.4862237>

[+ VIEW DESCRIPTION](#)

Effect of electron focusing in x-ray sources using LiTaO₃ crystals excited by neodymium-doped yttrium lithium fluoride laser light

Kosuke Nakahama, Michiaki Takahashi, Satoshi Abo, Fujio Wakaya and Mikio Takai
J. Vac. Sci. Technol. B **32**, 02B108 (2014); <http://dx.doi.org/10.1116/1.4864307>

[+ VIEW DESCRIPTION](#)

30TH NORTH AMERICAN MOLECULAR BEAM EPITAXY CONFERENCE (30TH NAMBE 2013)**Carrier lifetime studies in midwave infrared type-II InAs/GaSb strained layer superlattice**

Brianna Klein, Nutan Gautam, Elena Plis, Ted Schuler-Sandy, Thomas J. Rotter, Sanjay Krishna, Blair C. Connelly, Grace D. Metcalfe, Paul Shen and Michael Wraback
J. Vac. Sci. Technol. B **32**, 02C101 (2014); <http://dx.doi.org/10.1116/1.4862085>

[+ VIEW DESCRIPTION](#)

Closed-cycle cooling of cryopanel in molecular beam epitaxy

Ryan B. Lewis, Vahid Bahrami-Yekta, Medhaj J. Patel, Thomas Tiedje and Mostafa Masnadi-Shirazi
J. Vac. Sci. Technol. B **32**, 02C102 (2014); <http://dx.doi.org/10.1116/1.4862088>

[+ VIEW DESCRIPTION](#)

Study of thermal stability of distributed Bragg reflectors based on epitaxial rare-earth oxide and silicon heterostructures

Rytis Dargis, Jeffrey Leathersich, Andrew Clark and Erdem Arkun
J. Vac. Sci. Technol. B **32**, 02C103 (2014); <http://dx.doi.org/10.1116/1.4862951>

[+ VIEW DESCRIPTION](#)

InGaAs/GaAsSb based two-dimensional electron gases

Hermann Detz, Jonathan Silvano de Sousa, Horst Leonhardt, Pavel Klang, Tobias Zederbauer, Aaron Maxwell Andrews, Werner Schrenk, Jürgen Smoliner and Gottfried Strasser

J. Vac. Sci. Technol. B **32**, 02C104 (2014); <http://dx.doi.org/10.1116/1.4863299>

[+ VIEW DESCRIPTION](#)

Near infrared intersubband absorption of CdSe/MgSe quantum wells grown on InP substrate with an InAlAs buffer layer

Guopeng Chen, Kuaile Zhao, Maria C. Tamargo and Aidong Shen

J. Vac. Sci. Technol. B **32**, 02C105 (2014); <http://dx.doi.org/10.1116/1.4863496>

[+ VIEW DESCRIPTION](#)

Nanotemplate-directed InGaAs/GaAs single quantum dots: Toward addressable single photon emitter arrays

Jiefei Zhang, Zachary Lingley, Siyuan Lu and Anupam Madhukar

J. Vac. Sci. Technol. B **32**, 02C106 (2014); <http://dx.doi.org/10.1116/1.4863680>

[+ VIEW DESCRIPTION](#)

Semiempirical method of suppressing interference effects in photoluminescence spectra of GaN heterostructures

Yu-Li Wang, Kuan-Yu Chen, Wei-Chen Yang, Shao-Yen Chiu and Keh-Yung Cheng

J. Vac. Sci. Technol. B **32**, 02C107 (2014); <http://dx.doi.org/10.1116/1.4864054>

[+ VIEW DESCRIPTION](#)

MBE growth of P-doped 1.3 μm InAs quantum dot lasers on silicon

Alan Y. Liu, Chong Zhang, Andrew Snyder, Dmitri Lubyshev, Joel M. Fastenau, Amy W. K. Liu, Arthur C. Gossard and John E. Bowers

J. Vac. Sci. Technol. B **32**, 02C108 (2014); <http://dx.doi.org/10.1116/1.4864148>

[+ VIEW DESCRIPTION](#)

Optimum growth window for InAs/GaInSb superlattice materials tailored for very long wavelength infrared detection

Heather J. Haugan, Gail J. Brown, Krishnamurthy Mahalingam, Larry Grazulis, Gary T. Noe, Nathan E. Ogden and Junichiro Kono

J. Vac. Sci. Technol. B **32**, 02C109 (2014); <http://dx.doi.org/10.1116/1.4864746>

[+ VIEW DESCRIPTION](#)

Effect of surface states on the electrical properties of MBE grown modulation doped AlGaAs/GaAs

Alejandro Cisneros-de-la-Rosa, Irving Eduardo Cortes-Mestizo, Esteban Cruz-Hernández, Víctor Hugo Méndez-García, Luis Zamora-Peredo, José Vulfrano González-Fernández, Raúl Balderas-Navarro, Andrei Yu. Gorbachev and Máximo López-López

J. Vac. Sci. Technol. B **32**, 02C110 (2014); <http://dx.doi.org/10.1116/1.4863677>

[+ VIEW DESCRIPTION](#)

Selectively grown GaAs nanodisks on Si(100) by molecular beam epitaxy

Chia-Pu Chu, Shamsul Arafin, Guan Huang, Tianxiao Nie, Kang L. Wang, Yong Wang, Jin Zou, Syed M. Qasim and Mohammed S. BenSaleh

J. Vac. Sci. Technol. B **32**, 02C111 (2014); <http://dx.doi.org/10.1116/1.4865477>

[+ VIEW DESCRIPTION](#)

AlGaN cladding-free 482 nm continuous wave nitride laser diodes grown by plasma-assisted molecular beam epitaxy

Czesław Skierbiszewski, Henryk Turski, Grzegorz Muziol, Paweł Wolny, Grzegorz Cywiński, Szymon Grzanka, Julita Smalc-Koziorowska, Marta Sawicka, Piotr Perlin, Zbig R. Wasilewski and Sylwester Porowski

J. Vac. Sci. Technol. B **32**, 02C112 (2014); <http://dx.doi.org/10.1116/1.4865478>

[+ VIEW DESCRIPTION](#)

Engineering the color rendering index of phosphor-free InGaN/(Al)GaIn nanowire white light emitting diodes grown by molecular beam epitaxy

Ashfiqua T. Connie, Hieu P. T. Nguyen, Sharif M. Sadaf, Ishiang Shih and Zetian Mi

J. Vac. Sci. Technol. B **32**, 02C113 (2014); <http://dx.doi.org/10.1116/1.4865914>

[+ VIEW DESCRIPTION](#)

Study on the coalescence of dislocation-free GaN nanowires on Si and SiO_x

Shizhao Fan, Songrui Zhao, Xuedong Liu and Zetian Mi

J. Vac. Sci. Technol. B **32**, 02C114 (2014); <http://dx.doi.org/10.1116/1.4865915>

[+ VIEW DESCRIPTION](#)

Semipolar (20 $\bar{1}$) GaN laser diodes operating at 388 nm grown by plasma-assisted molecular beam epitaxy

Marta Sawicka, Grzegorz Muziol, Henryk Turski, Anna Feduniewicz-Żmuda, Marcin Kryśko, Szymon Grzanka, Ewa Grzanka, Julita Smalc-Koziorowska, Martin Albrecht, Robert Kucharski, Piotr Perlin and Czesław Skierbiszewski

J. Vac. Sci. Technol. B **32**, 02C115 (2014); <http://dx.doi.org/10.1116/1.4865913>

[+ VIEW DESCRIPTION](#)

High electron mobility in InSb epilayers and quantum wells grown with AlSb nucleation on Ge-on-insulator substrates

Mukul C. Debnath, Tetsuya D. Mishima, Michael B. Santos, Lucas C. Phinney, Terry D. Golding and Khalid Hossain

J. Vac. Sci. Technol. B **32**, 02C116 (2014); <http://dx.doi.org/10.1116/1.4866397>

[+ VIEW DESCRIPTION](#)

Silicon nitride thin films deposited using electron-beam evaporation in an RF plasma MBE system

D. Scott Katzer, David J. Meyer, David F. Storm, Neeraj Nepal and Virginia D. Wheeler

J. Vac. Sci. Technol. B **32**, 02C117 (2014); <http://dx.doi.org/10.1116/1.4867435>

[+ VIEW DESCRIPTION](#)

Orientation-dependent pseudomorphic growth of InAs for use in lattice-mismatched mid-infrared photonic structures

Charles Meyer, Emily Cheng and Gregory Triplett

J. Vac. Sci. Technol. B **32**, 02C118 (2014); <http://dx.doi.org/10.1116/1.4867879>[+ VIEW DESCRIPTION](#)

Rapid thermal annealing effect on GaAsBi/GaAs single quantum wells grown by molecular beam epitaxy

Perry C. Grant, Dongsheng Fan, Aboozar Mosleh, Shui-Qing Yu, Vitaliy G. Dorogan, Michael E. Hawkrige, Yuriy I. Mazur, Mourad Benamara, Gregory J. Salamo and Shane R. Johnson

J. Vac. Sci. Technol. B **32**, 02C119 (2014); <http://dx.doi.org/10.1116/1.4868110>[+ VIEW DESCRIPTION](#)

Molecular beam epitaxy using bismuth as a constituent in InAs and a surfactant in InAs/InAsSb superlattices

Preston T. Webster, Nathaniel A. Riordan, Chaturvedi Gogineni, Shi Liu, Jing Lu, Xin-Hao Zhao, David J. Smith, Yong-Hang Zhang and Shane R. Johnson

J. Vac. Sci. Technol. B **32**, 02C120 (2014); <http://dx.doi.org/10.1116/1.4868111>[+ VIEW DESCRIPTION](#)

Studying the formation of nitrogen δ -doped layers on GaAs(001) using reflection high-energy electron diffraction

Norihsa Nishimoto, Masahiko Kondow and Fumitaro Ishikawa

J. Vac. Sci. Technol. B **32**, 02C121 (2014); <http://dx.doi.org/10.1116/1.4868522>[+ VIEW DESCRIPTION](#)
