

Stanford



James Harris

James and Elenor Chesebrough Professor in the School of Engineering and Professor, by courtesy, of Materials Science and Engineering and of Applied Physics
Electrical Engineering

Bio

BIO

Harris utilizes molecular beam epitaxy (MBE) of III-V compound semiconductor materials to investigate new materials for electronic and optoelectronic devices. He utilizes heterojunctions, superlattices, quantum wells, and three-dimensional self-assembled quantum dots to create metastable engineered materials with novel or improved properties for electronic and optoelectronic devices. He has recently focused on integration of photonic devices and micro optics for creation of new minimally invasive bio and medical systems for micro-array and neural imaging.

ACADEMIC APPOINTMENTS

- Professor, Electrical Engineering
- Professor (By courtesy), Applied Physics
- Professor (By courtesy), Materials Science and Engineering
- Member, Bio-X
- Affiliate, Precourt Institute for Energy
- Affiliate, Stanford Woods Institute for the Environment
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Fellow, IEEE (1988)
- Fellow, American Physical Society (1992)
- Fellow, Optical Society of America (2005)
- Fellow, Materials Research Society (2009)
- Morris Liebmann Award, IEEE (2000)
- Welker Medal, International Symposium on Compound Semiconductors (2000)
- Alexander Humboldt Senior Research Prize, Alexander Humboldt (1999)
- MBE Innovator Award, International MBE Conference (2008)
- Elected Member, National Academy of Engineering (2011)
- Aristotle Award, Semiconductor Research Corporation (2013)
- Al Cho MBE Award, International MBE Conference (2014)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- PhD, Stanford University , Electrical Engineering (1969)
- MS, Stanford University , Electrical Engineering (1965)
- BS, Stanford University , Electrical Engineering (1964)

LINKS

- <http://www-ee.stanford.edu/~harris>: <http://www-ee.stanford.edu/~harris>

Teaching

COURSES

2018-19

- Principles and Models of Semiconductor Devices: EE 216 (Aut)

2017-18

- Principles and Models of Semiconductor Devices: EE 216 (Aut)
- Semiconductor Optoelectronic Devices: EE 243 (Win)

2016-17

- Principles and Models of Semiconductor Devices: EE 216 (Aut)
- Properties of Semiconductor Materials: EE 327 (Spr)
- Semiconductor Optoelectronic Devices: EE 243 (Win)

2015-16

- Physics of Advanced Semiconductor Devices: EE 328 (Spr)
- Principles and Models of Semiconductor Devices: EE 216 (Aut)
- Semiconductor Optoelectronic Devices: EE 243 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Payton Broaddus, Stephen Wolf

Publications

PUBLICATIONS

- **Influence of Ballistic Electron Contributions in Vertically Integrated Resonant Tunneling Diodes** *Superlattices and Microstructures*
Harris, J., S., Rascol, J., J. L., Martin, K., P., Carnahan, R., E., Higgins, R., J., Cury, L.
; 2 (7): 147-150
- **How Adding Electrons Scrambles the Electronic Spectrum of a Quantum Dot**
Harris, J., S., Patel, S., R., Stewart, D., R., Marcus, C., M., Gökcedag, M., Alhassid, Y.
- **A Solar Power System with Gallium Arsenide Solar Cells** *J. Energy*
Madewell, J., F., Nussberger, A., A., Harris, J., S.
- **Tensile-strained Ge/SiGe multiple quantum well microdisks** *Photonics Research*
Chen, X., Fenrich, C. S., Xue, M., Kao, M., Zang, K., Lu, C., Fei, E. T., Chen, Y., Huo, Y., Kamins, T. I., Harris, J. S.
2017; 5 (6): B7-B14

- **Simulation and fabrication of a new novel 3D injectable biosensor for high throughput genomics and proteomics in a lab-on-a-chip device.** *Nanotechnology*
Esfandyarpour, R., Esfandyarpour, H., Harris, J. S., Davis, R. W.
2013; 24 (46): 465301-?
- **Ultra-Compact and Low-Loss Polarization Rotator Based on Asymmetric Hybrid Plasmonic Waveguide** *IEEE PHOTONICS TECHNOLOGY LETTERS*
Gao, L., Huo, Y., Harris, J. S., Zhou, Z.
2013; 25 (21): 2081-2084
- **Theoretical Analysis of GeSn Alloys as a Gain Medium for a Si-Compatible Laser** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Dutt, B., Lin, H., Sukhdeo, D. S., Vulovic, B. M., Gupta, S., Nam, D., Saraswat, K. C., Harris, J. S.
2013; 19 (5)
- **Highly Selective Dry Etching of Germanium over Germanium-Tin (Ge_{1-x}Sn_x): A Novel Route for Ge_{1-x}Sn_x Nanostructure Fabrication.** *Nano letters*
Gupta, S., Chen, R., Huang, Y., Kim, Y., Sanchez, E., Harris, J. S., Saraswat, K. C.
2013; 13 (8): 3783-3790
- **Real-time, continuous, fluorescence sensing in a freely-moving subject with an implanted hybrid VCSEL/CMOS biosensor** *BIOMEDICAL OPTICS EXPRESS*
O'Sullivan, T. D., Heitz, R. T., Parashurama, N., Barkin, D. B., Wooley, B. A., Gambhir, S. S., Harris, J. S., Levi, O.
2013; 4 (8): 1332-1341
- **Label-free electronic probing of nucleic acids and proteins at the nanoscale using the nanoneedle biosensor** *BIOMICROFLUIDICS*
Esfandyarpour, R., Javanmard, M., Koochak, Z., Esfandyarpour, H., Harris, J. S., Davis, R. W.
2013; 7 (4)
- **Two-step growth of high quality Bi₂Te₃ thin films on Al₂O₃ (0001) by molecular beam epitaxy** *APPLIED PHYSICS LETTERS*
Harrison, S. E., Li, S., Huo, Y., Zhou, B., Chen, Y. L., Harris, J. S.
2013; 102 (17)
- **Optical Emission of a Strained Direct-Band-Gap Ge Quantum Well Embedded Inside InGaAs Alloy Layers** *PHYSICAL REVIEW LETTERS*
Pavarelli, N., Ochalski, T. J., Murphy-Armando, F., Huo, Y., Schmidt, M., Huyet, G., Harris, J. S.
2013; 110 (17)
- **Material characterization of high Sn-content, compressively-strained GeSn epitaxial films after rapid thermal processing** *JOURNAL OF CRYSTAL GROWTH*
Chen, R., Huang, Y., Gupta, S., Lin, A. C., Sanchez, E., Kim, Y., Saraswat, K. C., Kamins, T. I., Harris, J. S.
2013; 365: 29-34
- **Enhancement of photoluminescence from GaInNAsSb quantum wells upon annealing: improvement of material quality and carrier collection by the quantum well** *JOURNAL OF PHYSICS-CONDENSED MATTER*
Baranowski, M., Kudrawiec, R., Latkowska, M., Syperek, M., Misiewicz, J., Sarmiento, T., Harris, J. S.
2013; 25 (6)
- **Microneedle biosensor: A method for direct label-free real time protein detection** *SENSORS AND ACTUATORS B-CHEMICAL*
Esfandyarpour, R., Esfandyarpour, H., Javanmard, M., Harris, J. S., Davis, R. W.
2013; 177: 848-855
- **Antiphase domain annihilation during growth of GaP on Si by molecular beam epitaxy** *JOURNAL OF CRYSTAL GROWTH*
Lin, A. C., Fejer, M. M., Harris, J. S.
2013; 363: 258-263
- **Low-voltage broad-band electroabsorption from thin Ge/SiGe quantum wells epitaxially grown on silicon** *OPTICS EXPRESS*
Edwards, E. H., Lever, L., Fei, E. T., Kamins, T. I., Ikonic, Z., Harris, J. S., Kelsall, R. W., Miller, D. A.
2013; 21 (1): 867-876
- **Photon-enhanced thermionic emission from heterostructures with low interface recombination.** *Nature communications*
Schwede, J. W., Sarmiento, T., NARASIMHAN, V. K., Rosenthal, S. J., Riley, D. C., Schmitt, F., Bargatin, I., Sahasrabudhe, K., Howe, R. T., Harris, J. S., Melosh, N. A., Shen, Z.
2013; 4: 1576-?

- **Single-Cell Photonic Nanocavity Probes** *NANO Lett.*
Shambat, G., Kothapalli, S., R., Provine, J., Sarmiento, T., Harris, J., Gambhir, S., Sam
2013
- **Magnetic properties of gadolinium substituted Bi₂Te₃ thin films** *Appl. Phys. Lett.*
Harris, J., S., Li, S., Harrison, S., E., Huo, Y., Pushp, A., Yuan, H., T.
2013; 24 (102): 242412
- **Optical and Electronic Devices for Monolithically Integrated Photonics Circuits**
Cho, S., Kim, H., Park, B., G., Harris Jr., James, S.
2013
- **Design of High-Power Low-Noise 2-D Distributed Feedback Laser**
Paik, S., Cho, S., Leedle, K., Kim, H., Park, B., G., Harris, J., S.
2013
- **Silicon germanium waveguide for stronger optical confinement in integrated silicon photonics** *Photonics Nanostruct. Fundam. Appl.*
Cho, S., Park, J., Kim, H., Sinclair, R., Park, B., G., Harris Jr., J., S.
2013
- **Demonstration of a Ge/GeSn/Ge Quantum-Well Microdisk Resonator on Silicon: Enabling high-quality Ge (Sn) materials for micro and nanophotonics** *Nano Lett.*
Harris, J., S., Chen, R., Gupta, S., Huang, Y., C., Huo, Y., Rudy, C., W
in press.2013
- **Si/Ge/AlGaAs heterojunction high hole mobility transistor**
Cho, S., Kim, H., Park, B., G., Harris Jr., James, S.
2013
- **Low-Standby Power and High-Performance InAs/InGaAs/InP heterojunction Tunneling Field-Effect Transistor**
Harris, J., S., Cho, S., Woo, S., Yun, Kim, H., Seo, J. H., Lee, H., Gi
2013
- **Optical characterization of orientation-patterned GaP structures by micro reflectance difference spectroscopy** *J. Appl. Phys.*
Harris, J., S., Lastras-Martínez, L., F., Herrera-Jasso, R., Ulloa-Castillo, N., A., Balderas-Navarro, R., E., Lastras-Martínez, A.
2013; 114: 173504
- **Germanium Waveguide for On-Chip Optical Interconnect**
Harris, J., S., Cho, S., Kim, H., Paik, S., Kang, I. M., Lee, J., H.
2013
- **Design of AlGaAs/InGaAs Heterojunction Tunneling Field-Effect Transistor for Low-Standby-Power and High-Performance Application**
Harris, J., S., Yoon, Y., Jun, Cho, S., Seo, J., Hwa, Cho, E., S., Kang, S., W.
2013
- **Silicon-compatible high-hole-mobility transistor with an undoped germanium channel for low-power application** *Appl. Phys. Lett.*
Cho, S., Kang, I. M., Kim, K., Rok, Park, B., G., Harris Jr., J., S.
2013; 22 (103): 222102-1 – 222102-4
- **Mixed-Mode Simulation of Nanowire Ge/GaAs Heterojunction Tunneling Field-Effect Transistor for Circuit Applications** *IEEE J. Electron Devices Soc.*
Cho, S., Kim, H., Sun, M., C., Kang, I. M., Park, B., G., Harris Jr., J., S.
2013; 2 (1): 48-53
- **MBE growth of tensile-strained Ge quantum wells and quantum dots** *Frontiers of Optoelectronics*
Huo, Y., Lin, H., Chen, R., Rong, Y., Kamins, T., I., Harris, J., S.
2013
- **(Invited) GeSn Channel n and p MOSFETs** *ECS Trans.*
Gupta, S., Chen, R., Vincent, B., Lin, D., Magyari-Kope, B., Caymax, M.
2013; 50: 937-941

- **In Vitro Optical Fiber Biosensor for Integrated Optical System**
Cho, S., Kallassi, P., El, Kim, H., Park, B., G., Harris Jr., J., S.
2013
- **Fabrication of GeSn-On-Insulator (GSOI) to enable monolithic 3D co-integration of logic and photonics**
Harris, J., S., Lin, J. J., Gupta, S., Huang, Y., C., Kim, Y., Jin, M.
2013
- **High-Efficiency Nanostructured Window GaAs Solar Cells** *Nano Letters*
Liang, D., Kang, Y., Huo, Y., Chen, Y., Cui, Y., Harris, J., S.
2013; 10 (13): 4850-4856
- **In-vivo Performance of Photovoltaic Subretinal Prosthesis** *Conference on Ophthalmic Technologies XXIII as a part of the SPIE Photonics West BiOS Meeting*
Mandel, Y., Goetz, G., Lavinsky, D., Huie, P., Mathieson, K., Wang, L., Kamins, T., Manivanh, R., Harris, J., Palanker, D.
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Design optimization of an optically drivable heterogeneous MOSFET with silicon compatibility** *Conference on Physics and Simulation of Optoelectronic Devices XXI*
Cho, S., Kim, H., Yoo, S. J., Park, B., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Approaches for a Viable Germanium Laser: Tensile Strain, GeSn Alloys, and n-Type Doping** *2nd IEEE-Photonics-Society Optical Interconnects Conference*
Sukhdeo, D. S., Lin, H., Nam, D., Yuan, Z., Vulovic, B. M., Gupta, S., Harris, J. S., Dutt, B. (., Saraswat, K. C.
IEEE.2013: 112–113
- **Towards a Photonic Crystal Mode-Locked Laser** *Conference on Novel In-Plane Semiconductor Lasers XII*
Leedle, K., Janjua, A., Paik, S., Schnitzer, M. J., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Dilute phosphide nitride materials as photocathodes for electrochemical solar energy conversion** *Conference on Physics, Simulation, and Photonic Engineering of Photovoltaic Devices II*
Parameshwaran, V., Xu, X., Kang, Y., Harris, J., Wong, H. P., Clemens, B.
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Cortical responses elicited by photovoltaic subretinal prostheses exhibit similarities to visually evoked potentials.** *Nature communications*
Mandel, Y., Goetz, G., Lavinsky, D., Huie, P., Mathieson, K., Wang, L., Kamins, T., Galambos, L., Manivanh, R., Harris, J., Palanker, D.
2013; 4: 1980-?
- **Ge/SiGe asymmetric Fabry-Perot quantum well electroabsorption modulators** *OPTICS EXPRESS*
Edwards, E. H., Audet, R. M., Fei, E. T., Claussen, S. A., Schaevitz, R. K., Tasyurek, E., Rong, Y., Kamins, T. I., Harris, J. S., Miller, D. A.
2012; 20 (28): 29164-29173
- **Continuous sensing of tumor-targeted molecular probes with a vertical cavity surface emitting laser-based biosensor** *JOURNAL OF BIOMEDICAL OPTICS*
Parashurama, N., O'Sullivan, T. D., de la Zerda, A., El Kalassi, P., Cho, S., Liu, H., Teed, R., Levy, H., Rosenberg, J., Cheng, Z., Levi, O., Harris, J. S., Gambhir, et al
2012; 17 (11)
- **Electrically Driven Photonic Crystal Nanocavity Devices** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Shambat, G., Ellis, B., Petykiewicz, J., Mayer, M. A., Majumdar, A., Sarmiento, T., Harris, J. S., Haller, E. E., Vuckovic, J.
2012; 18 (6): 1700-1710
- **Optical Absorption Enhancement in Freestanding GaAs Thin Film Nanopyramid Arrays** *ADVANCED ENERGY MATERIALS*
Liang, D., Huo, Y., Kang, Y., Wang, K. X., Gu, A., Tan, M., Yu, Z., Li, S., Jia, J., Bao, X., Wang, S., Yao, Y., Wong, et al
2012; 2 (10): 1254-1260
- **Selective area growth of germanium and germanium/silicon-germanium quantum wells in silicon waveguides for on-chip optical interconnect applications** *OPTICAL MATERIALS EXPRESS*
Claussen, S. A., Balram, K. C., Fei, E. T., Kamins, T. I., Harris, J. S., Miller, D. A.
2012; 2 (10): 1336-1342

- **Process Considerations for 80-GHz High-Performance p-i-n Silicon Photodetector for Optical Interconnect** *JOURNAL OF SEMICONDUCTOR TECHNOLOGY AND SCIENCE*
Cho, S., Kim, H., Sun, M., Park, B., Harris, J. S.
2012; 12 (3): 370-376
- **Antenna electrodes for controlling electroluminescence** *NATURE COMMUNICATIONS*
Huang, K. C., Seo, M., Huo, Y., Sarmiento, T., Harris, J. S., Brongersma, M. L.
2012; 3
- **Epitaxial growth of quasi-phase matched GaP for nonlinear applications: Systematic process improvements** *18th American Conference on Crystal Growth and Epitaxy (ACCGE)/15th US Biennial Workshop on Organometallic Vapor Phase Epitaxy (OMVPE)*
Tassev, V., Snure, M., Peterson, R., Bedford, R., Bliss, D., Bryant, G., Mann, M., Goodhue, W., Vangala, S., Termkoa, K., Lin, A., Harris, J. S., Fejer, et al
ELSEVIER SCIENCE BV.2012: 72–77
- **Photovoltaic retinal prosthesis: implant fabrication and performance** *JOURNAL OF NEURAL ENGINEERING*
Wang, L., Mathieson, K., Kamins, T. I., Loudin, J. D., Galambos, L., Goetz, G., Sher, A., Mandel, Y., Huie, P., Lavinsky, D., Harris, J. S., Palanker, D. V.
2012; 9 (4)
- **Widely tunable midinfrared difference frequency generation in orientation-patterned GaAs pumped with a femtosecond Tm-fiber system** *OPTICS LETTERS*
Phillips, C. R., Jiang, J., Mohr, C., Lin, A. C., Langrock, C., Snure, M., Bliss, D., Zhu, M., Hartl, I., Harris, J. S., Fermann, M. E., Fejer, M. M.
2012; 37 (14): 2928-2930
- **Room-temperature electroluminescence from germanium in an Al_{0.3}Ga_{0.7}As/Ge heterojunction light-emitting diode by Gamma-valley transport** *OPTICS EXPRESS*
Cho, S., Park, B., Yang, C., Cheung, S., Yoon, E., Kamins, T. I., Ben Yoo, S. J., Harris, J. S.
2012; 20 (14): 14921-14927
- **Photovoltaic retinal prosthesis with high pixel density** *NATURE PHOTONICS*
Mathieson, K., Loudin, J., Goetz, G., Huie, P., Wang, L., Kamins, T. I., Galambos, L., Smith, R., Harris, J. S., Sher, A., Palanker, D.
2012; 6 (6): 391-397
- **Small-Signal Modeling of Gate-All-Around (GAA) Junctionless (JL) MOSFETs for Sub-millimeter Wave Applications** *JOURNAL OF SEMICONDUCTOR TECHNOLOGY AND SCIENCE*
Lee, J. S., Cho, S., Park, B., Harris, J. S., Kang, I. M.
2012; 12 (2): 230-239
- **Structural and optical characterization of SixGe1-x-ySny alloys grown by molecular beam epitaxy** *APPLIED PHYSICS LETTERS*
Lin, H., Chen, R., Lu, W., Huo, Y., Kamins, T. I., Harris, J. S.
2012; 100 (14)
- **Low-temperature growth of Ge1-xSnx thin films with strain control by molecular beam epitaxy** *THIN SOLID FILMS*
Lin, H., Chen, R., Huo, Y., Kamins, T. I., Harris, J. S.
2012; 520 (11): 3927-3930
- **Ge/SiGe Quantum Well Waveguide Modulator Monolithically Integrated With SOI Waveguides** *IEEE PHOTONICS TECHNOLOGY LETTERS*
Ren, S., Rong, Y., Claussen, S. A., Schaevitz, R. K., Kamins, T. I., Harris, J. S., Miller, D. A.
2012; 24 (6): 461-463
- **Investigation of the direct band gaps in Ge1-xSnx alloys with strain control by photoreflectance spectroscopy** *APPLIED PHYSICS LETTERS*
Lin, H., Chen, R., Lu, W., Huo, Y., Kamins, T. I., Harris, J. S.
2012; 100 (10)
- **Simple Electroabsorption Calculator for Designing 1310 nm and 1550 nm Modulators Using Germanium Quantum Wells** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
Schaevitz, R. K., Edwards, E. H., Roth, J. E., Fei, E. T., Rong, Y., Wahl, P., Kamins, T. I., Harris, J. S., Miller, D. A.
2012; 48 (2): 187-197
- **Ultrafast Direct Modulation of a Single-Mode Photonic Crystal Nanocavity Light-Emitting Diode** *Conference on Lasers and Electro-Optics (CLEO)*
Shambat, G., Ellis, B., Majumdar, A., Petykiewicz, J., Mayer, M., Sarmiento, T., Harris, J., Haller, E., Vuckovic, J.

IEEE.2012

- **Frequency Response of a Common-Source (CS) Amplifier Embedding Ge/GaAs Heterojunction-Based Tunneling Field-Effect Transistor (TFET)**
Harris, J., S., Hyungjin, S., Cho, Byung-Gook, James
2012
- **All-epitaxial Growth of Orientation-patterned Gallium Phosphide (OPGaP)** *Tech. Dig. OSA Lasers, Sources, and Related Photonic Devices, ITh5B.5-1-3*
Schunemann, P., G., Mohnkern, L., Vera, A., Yang, X., S., Lin, A., C., Harris, J., S
2012
- **Simulation Study on Process Conditions for High-Speed Silicon Photodetector and Quantum-Well Structuring for Increased Number of Wavelength Discriminations**
Cho, S., Kim, H., Sun, M., C., Kamins, T., I., Park, B., G., Harris Jr., J., S.
2012
- **Design Consideration for Heterojunction P-Type Tunneling Field-Effect Transistor with Narrow-Bandgap Source Material**
Harris, J., S., Hyun, S., Cho, Byung-Gook, W., Kim, James
2012
- **Room Temperature Photoluminescence from Ge/SiGe Quantum Well Structure in Microdisk Resonator**
Harris, J., S., Chen, X., Huo, Y., Fei, E., Shambat, G., Liu, X.
2012
- **MBE growth of tensile-strained Ge quantum wells and quantum dots** *Front. Optoelectron. Chin. Online*
Huo, Y., Lin, H., Chen, R., Rong, Y., Kamins, T., I., Harris, J., S.
2012
- **1550-nm Germanium Light-Emitting Diode by Momentum Conservation Transport**
Harris, J., S., Cho, S., Cheung, S., Yang, C., Kim, H., Yoon, E.
2012
- **Monte Carlo Simulations of the Influence of Localization Centres on Carrier Dynamics in GaInNAs Quantum Wells** *Acta Physica Polonica*
Harris, J., S., Baranowski, M., Kudrawiec, R., Latkowska, M., Syperek, M., Misiewicz, J.
2012; 6 (122): 1022-1025
- **Temperature dependence of Ge quantum well light emitting diode on Si substrate**
Harris, J., S., Fei, E., T., Yijie Huo, E., T., Chen, X., Miller, G., Zang, K.
2012
- **GaInNAs(Sb) Long-Wavelength VCSELs** *VCSELs, Fundamentals, Technology and Applications of Vertical-Cavity Surface-Emitting Lasers*
Harris, J., S., Bae, H.
edited by Michalzik, R.
Springer-Verlag Berlin Heidelberg.2012: 1–25
- **Photonic Crystal Nanocavity Lasers and Modulators** *25th IEEE Photonics Conference (IPC)*
Vuckovic, J., Shambat, G., Petykiewicz, J., Ellis, B., Majumdar, A., Sarmiento, T., Mayer, M., Harris, J., Haller, E.
IEEE.2012: 459–460
- **Photovoltaic retinal prosthesis for restoring sight to the blind: implant design and fabrication** *Conference on Micromachining and Microfabrication Process Technology XVII*
Wang, L., Mathieson, K., Kamins, T. I., Loudin, J., Galambos, L., Harris, J. S., Palanker, D.
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Light Emission in Ge Quantum Wells** *Conference on Lasers and Electro-Optics (CLEO)*
Fei, E. T., Huo, Y., Shambat, G., Chen, X., Liu, X., Claussen, S. A., Edwards, E. H., Kamins, T. I., Miller, D. A., Vuckovic, J., Harris, J. S.
IEEE.2012
- **Optical Fiber Tips Functionalized with Semiconductor Photonic Crystal Cavities** *Conference on Lasers and Electro-Optics (CLEO)*
Shambat, G., Provine, J., Rivoire, K., Sarmiento, T., Harris, J., Vuckovic, J.
IEEE.2012

- **A New Approach to Ge Lasers with Low Pump Power** *25th IEEE Photonics Conference (IPC)*
Chen, X., Huo, Y., Fei, E. T., Shambat, G., Zang, K., Liu, X., Chen, Y., Kamins, T. I., Vuckovic, J., Harris, J. S.
IEEE.2012: 60–61
- **Optical properties of Ge_{1-z}Sn_z/SixGe_{1-x}ySny heterostructures** *25th IEEE Photonics Conference (IPC)*
Lin, H., Chen, R., Lu, W., Huo, Y., Kamins, T. I., Harris, J. S.
IEEE.2012: 919–920
- **GaAs thin film nanostructure arrays for III-V solar cell applications** *Conference on Photonic and Phononic Properties of Engineered Nanostructures II*
Liang, D., Kang, Y., Huo, Y., Wang, K. X., Gu, A., Tan, M., Yu, Z., Lia, S., Jia, J., Bao, X., Wang, S., Yao, Y., Fan, et al
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Ultra-Low Threshold and High Speed Electrically Driven Photonic Crystal Nanocavity Lasers and LEDs** *Conference on Lasers and Electro-Optics (CLEO)*
Vuckovic, J., Ellis, B., Shambat, G., Petykiewicz, J., Majumdar, A., Sarmiento, T., Mayer, M., Harris, J., Haller, E.
IEEE.2012
- **Electrically driven photonic crystal nanocavity lasers, LEDs, and modulators** *Conference on Novel In-Plane Semiconductor Lasers XI*
Shambat, G., Ellis, B., Mayer, M., Majumdar, A., Petykiewicz, J., Sarmiento, T., Harris, J., Haller, E. E., Vuckovic, J.
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Selective-Area Growth of Ge and Ge/SiGe Quantum Wells in 3 μm Silicon-on-Insulator Waveguides** *Conference on Lasers and Electro-Optics (CLEO)*
Claussen, S. A., Balram, K. C., Fei, E. T., Kamins, T. I., Harris, J. S., Miller, D. A.
IEEE.2012
- **Simulation study on scaling limit of silicon tunneling field-effect transistor under tunneling-predominance** *IEICE ELECTRONICS EXPRESS*
Cho, S., Kim, H., Sun, M., Kang, I. M., Park, B., Harris, J. S.
2012; 9 (9): 828-833
- **Silicon-compatible compound semiconductor tunneling field-effect transistor for high performance and low standby power operation** *APPLIED PHYSICS LETTERS*
Cho, S., Kang, I. M., Kamins, T. I., Park, B., Harris, J. S.
2011; 99 (24)
- **Analyses on Small-Signal Parameters and Radio-Frequency Modeling of Gate-All-Around Tunneling Field-Effect Transistors** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
Cho, S., Lee, J. S., Kim, K. R., Park, B., Harris, J. S., Kang, I. M.
2011; 58 (12): 4164-4171
- **Molecular beam epitaxy grown GaNAsSb 1 eV photovoltaic cell** *JOURNAL OF CRYSTAL GROWTH*
Tan, K. H., Wicaksono, S., Loke, W. K., Li, D., Yoon, S. F., Fitzgerald, E. A., Ringel, S. A., Harris, J. S.
2011; 335 (1): 66-69
- **Optical fiber tips functionalized with semiconductor photonic crystal cavities** *APPLIED PHYSICS LETTERS*
Shambat, G., Provine, J., Rivoire, K., Sarmiento, T., Harris, J., Vuckovic, J.
2011; 99 (19)
- **Ultrafast direct modulation of a single-mode photonic crystal nanocavity light-emitting diode** *NATURE COMMUNICATIONS*
Shambat, G., Ellis, B., Majumdar, A., Petykiewicz, J., Mayer, M. A., Sarmiento, T., Harris, J., Haller, E. E., Vuckovic, J.
2011; 2
- **Increased photoluminescence of strain-reduced, high-Sn composition Ge_{1-x}Sn_x alloys grown by molecular beam epitaxy** *APPLIED PHYSICS LETTERS*
Chen, R., Lin, H., Huo, Y., Hitzman, C., Kamins, T. I., Harris, J. S.
2011; 99 (18)
- **Fabrication and Analysis of Epitaxially Grown Ge_{1-x}Sn_x Microdisk Resonator With 20-nm Free-Spectral Range** *IEEE PHOTONICS TECHNOLOGY LETTERS*
Cho, S., Chen, R., Koo, S., Shambat, G., Lin, H., Park, N., Vuckovic, J., Kamins, T. I., Park, B., Harris, J. S.
2011; 23 (20)
- **Design Optimization of a Type-I Heterojunction Tunneling Field-Effect Transistor (I-HTFET) for High Performance Logic Technology** *JOURNAL OF SEMICONDUCTOR TECHNOLOGY AND SCIENCE*

- Cho, S., Sun, M., Kim, G., Kamins, T. I., Park, B., Harris, J. S.
2011; 11 (3): 182-189
- **Nanobeam photonic crystal cavity light-emitting diodes** *APPLIED PHYSICS LETTERS*
Shambat, G., Ellis, B., Petykiewicz, J., Mayer, M. A., Sarmiento, T., Harris, J., Haller, E. E., Vuckovic, J.
2011; 99 (7)
 - **Effects of Growth Temperatures on Crystal Quality of GaN by Vapor Phase Epitaxy Using GaCl₃ and NH₃** *JAPANESE JOURNAL OF APPLIED PHYSICS*
Ueda, T., Yuri, M., Harris, J. S.
2011; 50 (8)
 - **Raman study of strained Ge_{1-x}Sn_x alloys** *APPLIED PHYSICS LETTERS*
Lin, H., Chen, R., Huo, Y., Kamins, T. I., Harris, J. S.
2011; 98 (26)
 - **Optical Gain in GaInNAs and GaInNAsSb Quantum Wells** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
Ferguson, J. W., Blood, P., Smowton, P. M., Bae, H., Sarmiento, T., Harris, J. S., Tansu, N., Mawst, L. J.
2011; 47 (6): 870-877
 - **X-ray diffraction analysis of step-graded In_xGa_{1-x}As buffer layers grown by molecular beam epitaxy** *16th International Conference on Molecular Beam Epitaxy (ICMBE)*
Lin, H., Huo, Y., Rong, Y., Chen, R., Kamins, T. I., Harris, J. S.
ELSEVIER SCIENCE BV.2011: 17-20
 - **Two-dimensional III-V nucleation on Si for nonlinear optics** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*
Lin, A. C., Harris, J. S., Fejer, M. M.
2011; 29 (3)
 - **Ultralow-threshold electrically pumped quantum-dot photonic-crystal nanocavity laser** *NATURE PHOTONICS*
Ellis, B., Mayer, M. A., Shambat, G., Sarmiento, T., Harris, J., Haller, E. E., Vuckovic, J.
2011; 5 (5): 297-300
 - **Experimental demonstration of two methods for controlling the group delay in a system with photonic-crystal resonators coupled to a waveguide** *OPTICS LETTERS*
Huo, Y., Sandhu, S., Pan, J., Stuhmann, N., Povinelli, M. L., Kahn, J. M., Harris, J. S., Fejer, M. M., Fan, S.
2011; 36 (8): 1482-1484
 - **Selective epitaxial growth of Ge/Si_{0.15}Ge_{0.85} quantum wells on Si substrate using reduced pressure chemical vapor deposition** *APPLIED PHYSICS LETTERS*
Ren, S., Rong, Y., Kamins, T. I., Harris, J. S., Miller, D. A.
2011; 98 (15)
 - **Strong enhancement of direct transition photoluminescence with highly tensile-strained Ge grown by molecular beam epitaxy** *APPLIED PHYSICS LETTERS*
Huo, Y., Lin, H., Chen, R., Makarova, M., Rong, Y., Li, M., Kamins, T. I., Vuckovic, J., Harris, J. S.
2011; 98 (1)
 - **Photovoltaic Retinal Prosthesis** *Conference on Ophthalmic Technologies XXI*
Loudin, J., Mathieson, K., Kamins, T., Wang, L., Galambos, L., Huie, P., Sher, A., Harris, J., Palanker, D.
SPIE-INT SOC OPTICAL ENGINEERING.2011
 - **MBE growth of tensile-strained Ge quantum wells and quantum dots** *Front. Optoelectron.*
Huo, Y., Lin, H., Chen, R., Rong, Y., Kamins, T. I., Harris, J. S.
2011
 - **Experimental demonstration of two methods for controlling the group delay in a system with photonic-crystal resonators coupled to a waveguide** *Opt. Lett.*
Harris, J. S., Huo, Y., Sandhu, S., Pan, J., Stuhmann, N., Povinelli, M.
2011; 4 (36): 1482-1483
 - **Small-Signal Modeling of Gate-All-Around (GAA) Junctionless MOSFETs for Sub-millimeter Wave Application**
Cho, S., Lee, J., Sung, Kang, I., Man, Park, B., G., Harris, J. S.

2011

- **Silicon-Compatible Bulk-Type Compound Junctionless Field-Effect Transistor**
Harris, J., S., Se, S., Cho, Byung-Gook, H., Park, James
2011
- **Direct-Bandgap Photoluminescence of MBE-grown Ge_{1-x}Sn_x Alloys**
Chen, R., Huo, Y., Lin, H., Hitzman, C., J., Kamins, T., I., Harris, J., S.
2011
- **Silicon-compatible compound semiconductor tunneling field-effect transistor for high performance and low standby power operation** *Applied Phys. Lett.*
Cho, S., Kang, I. M., Kamins, T., I., Park, B., G., Harris Jr., J., S.
2011; 24 (99): 243505-1-4
- **Ge quantum well resonator modulators**
Schaevitz, R., K., Rong, Y., Claussen, S., A., Kamins, T., I., Vuckovic, J., Harris Jr., J., S.
2011
- **Fabrication and Characterization of Whispering Gallery Mode (WGM) Microdisk Resonator Based on Epitaxially Grown GeSn**
Harris, J., S., Cho, S., Chen, R., Lin, H., Huo, Y., Shambat, G.
2011
- **Design Optimization of Type-I Heterojunction Tunneling Field-Effect Transistor (I-HTFET) of Ge-AlxGa1-xAs System for High Performance Logic Technology**
Cho, S., Sun, M., C., Kim, G., Park, B., G., Harris, J., S.
2011
- **Surface Roughness Effect on Q-Factor of Ge Whispering Gallery Mode Microdisk Resonator**
Harris, J., S., Cho, S., Koo, S., Yoo, K., Pickett, E., R., Park, N.
2011
- **A novel nano-structured GaAs solar cell**
Harris, J., S., Liang, D., Gu, A., Huo, Y., Yan, J., Li, S.
2011
- **A Ge/SiGe quantum well waveguide modulator monolithically integrated with SOI waveguides**
Kamins, T., I., Harris, J., S., B., D., A.
2011
- **Fast epitaxial growth of thick quasi-phase matched GaP for applications in the MIR and THz: determination of the optimal substrate and pattern orientation** *36th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz)*
Tassev, V., Snure, M., Peterson, R., Bliss, D., Bryant, G., Goodhue, W., Vangala, S., Termkoa, K., Lin, A., Harris, J. S., Fejer, M. M., Yapp, C.
IEEE.2011
- **Simple Electroabsorption Calculator for Germanium Quantum Well Devices**
Audet, R., M., Rong, Y., Claussen, S., A., Tasyurek, E., Roth, J., E., Harris Jr., J., S.
2011
- **Optical gain in GaInNAs and GaInNAsSb quantum wells** *Conference on Lasers and Electro-Optics (CLEO)*
Ferguson, J. W., Blood, P., Smowton, P. M., Bae, H., Sarmiento, T., Harris, J. S., Tansu, N., Mawst, L. J.
IEEE.2011
- **Integrated photonic structures for parallel fluorescence and refractive index biosensing** *Conference on Photonic Microdevices/Microstructures for Sensing III*
Lee, M. M., O'Sullivan, T. D., Cerruto, A., Liu, V., Zhang, J., Levi, O., Lee, H., Brueck, S. R., Fan, S., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2011
- **Emerging applications for vertical cavity surface emitting lasers** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
Harris, J. S., O'Sullivan, T., Sarmiento, T., Lee, M. M., Vo, S.
2011; 26 (1)
- **Ultra-low Threshold Electrically Pumped Quantum Dot Photonic Crystal Nanocavity Laser** *Conference on Lasers and Electro-Optics (CLEO)*

- Ellis, B., Mayer, M. A., Shambat, G., Sarmiento, T., Harris, J., Haller, E. E., Vuckovic, J.
IEEE.2011
- **GeSn Technology: Extending the Ge Electronics Roadmap** *IEEE International Electron Devices Meeting (IEDM)*
Gupta, S., Chen, R., Magyari-Kope, B., Lin, H., Yang, B., Nainani, A., Nishi, Y., Harris, J. S., Saraswat, K. C.
IEEE.2011
 - **Rigorous Design of 22-nm Node 4-Terminal SOI FinFETs for Reliable Low Standby Power Operation with Semi-empirical Parameters** *JOURNAL OF SEMICONDUCTOR TECHNOLOGY AND SCIENCE*
Cho, S., O'uchi, S., Endo, K., Kim, S. W., Son, Y., Kang, I. M., Masahara, M., Harris, J. S., Park, B.
2010; 10 (4): 265-275
 - **Fully transparent InGaZnO thin film transistors using indium tin oxide/graphene multilayer as source/drain electrodes** *APPLIED PHYSICS LETTERS*
Seo, D., Jeon, S., Seo, S., Song, I., Kim, C., Park, S., Harris, J. S., Chung, U.
2010; 97 (17)
 - **Tuning the coherent interaction in an on-chip photonic-crystal waveguide-resonator system** *APPLIED PHYSICS LETTERS*
Pan, J., Huo, Y., Sandhu, S., Stuhmann, N., Povinelli, M. L., Harris, J. S., Fejer, M. M., Fan, S.
2010; 97 (10)
 - **Implantable semiconductor biosensor for continuous in vivo sensing of far-red fluorescent molecules** *OPTICS EXPRESS*
O'Sullivan, T., Munro, E. A., Parashurama, N., Conca, C., Gambhir, S. S., Harris, J. S., Levi, O.
2010; 18 (12): 12513-12525
 - **Electrically pumped photonic crystal nanocavity light sources using a laterally doped p-i-n junction** *APPLIED PHYSICS LETTERS*
Ellis, B., Sarmiento, T., Mayer, M., Zhang, B., Harris, J., Haller, E., Vuckovic, J.
2010; 96 (18)
 - **Nanobeam photonic crystal cavity quantum dot laser** *OPTICS EXPRESS*
Gong, Y., Ellis, B., Shambat, G., Sarmiento, T., Harris, J. S., Vuckovic, J.
2010; 18 (9): 8781-8789
 - **Characteristics of thick ZnSe films on quasi-phase-matched (QPM) GaAs substrates** *17th Amer Conference on Crystal Growth and Epitaxy/14th United States Biennial Workshop on Organometallic Vapor Phase Epitaxy/6th Inter Workshop on Modeling in Crystal Growth*
Singh, N. B., Kanner, G. S., Berghmans, A., Kahler, D., Lin, A., Wagner, B., Kelley, S. P., KNUTESON, D. J., HOLMSTROM, R., Schepler, K. L., Peterson, R., Fejer, M. M., Harris, et al
ELSEVIER SCIENCE BV.2010: 1142-45
 - **Extracting systematic factors in a continuous-time credit migration model** *JOURNAL OF CREDIT RISK*
Thompson, H., Harris, J.
2010; 6 (1): 31-53
 - **Photorefectance and photoluminescence study of GaInNAsSb layers lattice matched to InP** *JOURNAL OF APPLIED PHYSICS*
Kudrawiec, R., Sarmiento, T., Poloczek, P., Misiewicz, J., Harris, J. S.
2010; 107 (4)
 - **DESIGN AND GROWTH OF III-V NANOWIRE SOLAR CELL ARRAYS ON LOW COST SUBSTRATES** *35th IEEE Photovoltaic Specialists Conference*
Gu, A., Huo, Y., Hu, S., Sarmiento, T., Pickett, E., Liang, D., Li, S., Lin, A., Thombare, S., Yu, Z., Fan, S., McIntyre, P., Cui, et al
IEEE.2010: 2034-2037
 - **Simple electroabsorption model for germanium quantum well devices**
Harris, J. S., Schaevitz, R., K., Edwards, E., H., Audet, R., M., Rong, Y., Ren
2010
 - **Simple electroabsorption model for silicongermanium/germanium quantum well devices**
Harris, J. S., Schaevitz, R., K., Roth, J., E., Edwards, E., H., Audet, R., M., Claussen
2010
 - **Fabrication of Prototype Magnetic Coupled Spin-torque Devices for Non-volatile Logic Applications**
Leem, L., Harris, J. S., Rettner, C., Hughes, B., Jiang, X., Yang, S., H.
2010

- **Experimental demonstration of an all-optical analogue to the superradiance effect in an on-chip photonic crystal resonator system** *Phys. Rev.*
Pan, J., Sandhu, S., Huo, Y., Stuhmann, N., Povinelli, M., Harris, J. S., S.
2010; 4 (B81): 041101-1-3
- **Multi-scale Simulations of Partially Unzipped CNT Hetero-junction Tunneling Field Effect Transistor** *International Electron Devices Meeting (IEDM)*
Leem, L., Srivastava, A., Li, S., Magyari-Koepe, B., Iannaccone, G., Harris, J. S., Fiori, G.
IEEE.2010
- **Fabrication of an integrated 670nm VCSEL-based sensor for miniaturized fluorescence sensing** *Conference on Vertical-Cavity Surface-Emitting Lasers XIV*
O'Sullivan, T. D., Munro, E., Harris, J. S., Levi, O.
SPIE-INT SOC OPTICAL ENGINEERING.2010
- **Si-Ge Surface-normal Asymmetric Fabry-Perot Quantum-confined Stark Effect Electroabsorption Modulator** *23rd Annual Meeting of the IEEE Photonics-Society*
Edwards, E. H., Audet, R. M., Rong, Y., Claussen, S. A., Schaevitz, R. K., Tasyurek, E., Ren, S., Kamins, T. I., Harris, J. S., Miller, D. A., Dosunmu, O. I., Uenlue, M. S.
IEEE.2010: 514-515
- **Integration of Germanium Quantum Well Structures on a Silicon-on-Insulator Waveguide Platform for Optical Modulator Applications** *7th IEEE International Conference on Group IV Photonics (GFP)*
Ren, S., Rong, Y., Kamins, T. I., Harris, J. S., Miller, D. A.
IEEE.2010: 60-62
- **MBE growth of high Sn-percentage GeSn alloys with a composition-dependent absorption-edge shift** *7th IEEE International Conference on Group IV Photonics (GFP)*
Huo, Y., Chen, R., Lin, H., Kamins, T. I., Harris, J. S.
IEEE.2010: 344-346
- **Experimental demonstration of an all-optical analogue to the superradiance effect in an on-chip photonic crystal resonator system** *PHYSICAL REVIEW B*
Pan, J., Sandhu, S., Huo, Y., Stuhmann, N., Povinelli, M. L., Harris, J. S., Fejer, M. M., Fan, S.
2010; 81 (4)
- **Electrically Pumped Photonic Crystal Nanocavities Using a Laterally Doped p-i-n Junction** *Conference on Lasers and Electro-Optics (CLEO)/Quantum Electronics and Laser Science Conference (QELS)*
Ellis, B., Sarmiento, T., Mayer, M., Stone, P., Beeman, J., Zhang, B., Dubon, O., Haller, E., Yamamoto, Y., Harris, J., Vuckovic, J.
IEEE.2010
- **Quantum-Confined Stark Effect in Ge/SiGe Quantum Wells on Si** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Rong, Y., Ge, Y., Huo, Y., Fiorentino, M., Tan, M. R., Kamins, T. I., Ochalski, T. J., Huyet, G., Harris, J. S.
2010; 16 (1): 85-92
- **FACETING AND DISORDER IN NANOWIRE SOLAR CELL ARRAYS** *35th IEEE Photovoltaic Specialists Conference*
Pickett, E., Gu, A., Huo, Y., Garnett, E., Hu, S., Sarmiento, T., Thombare, S., Liang, D., Li, S., Cui, Y., McGehee, M., McIntyre, P., Harris, et al
IEEE.2010: 1848-1853
- **Nonradiative recombination in 1.56 μm GaInNAsSb/GaNAs quantum-well lasers** *APPLIED PHYSICS LETTERS*
Ferguson, J. W., Smowton, P. M., Blood, P., Bae, H., Sarmiento, T., Harris, J. S.
2009; 95 (23)
- **Design and Analysis of CMOS-Controlled Tunable Photodetectors for Multiwavelength Discrimination** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
Chen, R., Fu, J., Miller, D. A., Harris, J. S.
2009; 27 (23): 5451-5460
- **Optical probes of orientation-patterned ZnSe quasi-phase-matched devices** *OPTICAL ENGINEERING*
Kanner, G. S., Marable, M. L., Singh, N. B., Berghmans, A., Kahler, D., Wagner, B., Lin, A., Fejer, M. M., Harris, J. S., Schepler, K. L.
2009; 48 (11)
- **GaAs-based 1.53 μm GaInNAsSb vertical cavity surface emitting lasers** *ELECTRONICS LETTERS*
Sarmiento, T., Bae, H. P., O'Sullivan, T. D., Harris, J. S.
2009; 45 (19): 978-U28

- **Electrically controlled modulation in a photonic crystal nanocavity** *OPTICS EXPRESS*
Englund, D., Ellis, B., Edwards, E., Sarmiento, T., Harris, J. S., Miller, D. A., Vuckovic, J.
2009; 17 (18): 15409-15419
- **Atomic arrangement and emission properties of GaAs(In, Sb)N quantum wells** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
Mintairov, A. M., Sun, K., Merz, J. L., Yuen, H., Bank, S., Wistey, M., Harris, J. S., PEAKE, G., Egorov, A., Ustinov, V., Kudrawiec, R., Misiewicz, J.
2009; 24 (7)
- **Magnetic coupled spin-torque devices for nonvolatile logic applications** *53rd Annual Conference on Magnetism and Magnetic Materials*
Leem, L., Harris, J. S.
AMER INST PHYSICS.2009
- **High-quality III-V semiconductor MBE growth on Ge/Si virtual substrates for metal-oxide-semiconductor device fabrication** *JOURNAL OF CRYSTAL GROWTH*
Choi, D., Harris, J. S., Kim, E., McIntyre, P. C., Cagnon, J., Stemmer, S.
2009; 311 (7): 1962-1971
- **QUaD: A HIGH-RESOLUTION COSMIC MICROWAVE BACKGROUND POLARIMETER** *ASTROPHYSICAL JOURNAL*
Hinderks, J. R., Ade, P., Bock, J., Bowden, M., Brown, M. L., Cahill, G., Carlstrom, J. E., Castro, P. G., Church, S., Culverhouse, T., Friedman, R., Ganga, K., Gear, et al
2009; 692 (2): 1221-1246
- **Contactless electroreflectance of GaInNAsSb/GaNAs/GaAs quantum wells emitting at 1.5-1.65 μm : Broadening of the fundamental transition** *APPLIED PHYSICS LETTERS*
Kudrawiec, R., Poloczek, P., Misiewicz, J., Bae, H. P., Sarmiento, T., Bank, S. R., Yuen, H. B., Wistey, M. A., Harris, J. S.
2009; 94 (3)
- **Implantable optical biosensor for in vivo molecular imaging** *Conference on Optical Fibers and Sensors for Medical Diagnostics and Treatment Applications IX*
O'Sullivan, T. D., Munro, E., de la Zerda, A., Parashurama, N., Teed, R., Walls, Z., Levi, O., Gambhir, S. S., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2009
- **High quality III-V materials growth on Si (100) substrate via Ge buffer** *J. Crystal Growth*
Choi, D., Cagnon, J., Kim, E., Stemmer, S., McIntyre, P., C., Harris, J., S.
2009: 1962-71
- **Origin of non radiative recombination in GaInNAsSb/GaNAs quantum well lasers**
Ferguson, J., Smowton, P., Blood, P., Bae, H., P., Sarmiento, T., Harris, J., S.
2009
- **A Implantable optical biosensor for in vivo molecular imaging**
Harris, J., S., O'Sullivan, T., D., Munro, E., Zerda, A., de la, Parashurama, N., Teed, R.
2009
- **Fermi Level Depinning For the Design of III-V FET Source/Drain Contacts** *International Symposium on VLSI Technology, Systems and Applications*
Hu, J., Guan, X., Choi, D., Harris, J. S., Saraswat, K., Wong, H. P.
IEEE.2009: 123-124
- **Near-infrared in vivo fluorescence sensor with integrated dielectric emission filter** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2009)*
O'Sullivan, T. D., Munro, E., Conca, C., Parashurama, N., de la Zerda, A., Gambhir, S. S., Harris, J. S., Levi, O.
IEEE.2009: 3085-3086
- **High Efficiency Solar Cells based on Spontaneous Emission Inhibition in Photonic Crystals** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2009)*
Ellis, B., Sarmiento, T., Harris, J., Vuckovic, J.
IEEE.2009: 2659-2660
- **1528 nm GaInNAsSb/GaAs Vertical Cavity Surface Emitting Lasers** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2009)*
Sarmiento, T., Bae, H., O'Sullivan, T. D., Harris, J. S.

IEEE.2009: 1629–1630

- **Direct Band Gap Tensile-Strained Germanium** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2009)*
Huo, Y., Lin, H., Rong, Y., Makarova, M., Kamins, T. I., Vuckovic, J., Harris, J. S.
IEEE.2009: 824–825
- **Towards responsible use of cognitive-enhancing drugs by the healthy** *NATURE*
Greely, H., Sahakian, B., Harris, J., Kessler, R. C., Gazzaniga, M., Campbell, P., Farah, M. J.
2008; 456 (7223): 702-705
- **Optical Properties of Dilute Nitride InN(As)Sb Quantum Wells and Quantum Dots Grown by Molecular Beam Epitaxy** *JOURNAL OF ELECTRONIC MATERIALS*
Kim, S. M., Yuen, H. B., Hatami, F., Chin, A., Harris, J. S.
2008; 37 (12): 1774-1779
- **Growth of mm-thick orientation-patterned GaAs for IR and THz generation** *JOURNAL OF CRYSTAL GROWTH*
Lynch, C., Bliss, D. F., Zens, T., Lin, A., Harris, J. S., Kuo, P. S., Fejer, M. M.
2008; 310 (24): 5241-5247
- **Analysis of Active Hybrid Fiber-Semiconductor Devices for Optical Networks** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
Khalili, A., Lim, X. H., Bae, H., Harris, J. S.
2008; 44 (11-12): 1042-1054
- **A review of progress on nano-aperture VCSEL** *CHINESE OPTICS LETTERS*
Rao, Z., Vo, S., Harris, J. S.
2008; 6 (10): 748-754
- **Low surface roughness and threading dislocation density Ge growth on Si (001)** *JOURNAL OF CRYSTAL GROWTH*
Choi, D., Ge, Y., Harris, J. S., Cagnon, J., Stemmer, S.
2008; 310 (18): 4273-4279
- **Pre-atomic layer deposition surface cleaning and chemical passivation of (100) In_{0.2}Ga_{0.8}As and deposition of ultrathin Al₂O₃ gate insulators** *APPLIED PHYSICS LETTERS*
Shin, B., Choi, D., Harris, J. S., McIntyre, P. C.
2008; 93 (5)
- **On the Fermi level pinning in as-grown GaInNAs(Sb)/GaAs quantum wells with indium content of 8%-32%** *JOURNAL OF APPLIED PHYSICS*
Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S., Motyka, M., Misiewicz, J.
2008; 104 (3)
- **Formation of an oxide-free Ge/TiO₂ interface by atomic layer deposition on brominated Ge** *APPLIED PHYSICS LETTERS*
Ardalan, P., Pickett, E. R., Harris, J. S., Marshall, A. F., Bent, S. F.
2008; 92 (25)
- **Molecular-beam epitaxial growth of III-V semiconductors on Ge/Si for metal-oxide-semiconductor device fabrication** *APPLIED PHYSICS LETTERS*
Choi, D., Kim, E., McIntyre, P. C., Harris, J. S.
2008; 92 (20)
- **Aligning microcavity resonances in silicon photonic-crystal slabs using laser-pumped thermal tuning** *APPLIED PHYSICS LETTERS*
Pan, J., Huo, Y., Yamanaka, K., Sandhu, S., Scaccabarozzi, L., Timp, R., Povinelli, M. L., Fan, S., Fejer, M. M., Harris, J. S.
2008; 92 (10)
- **Terahertz sources based on intracavity parametric down-conversion in quasi-phase-matched gallium arsenide** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Schaar, J. E., Vodopyanov, K. L., Kuo, P. S., Fejer, M. M., Yu, X., Lin, A., Harris, J. S., Bliss, D., Lynch, C., Kozlov, V. G., Hurlbut, W.
2008; 14 (2): 354-362
- **The quasi-optical design of the QUAD telescope** *INFRARED PHYSICS & TECHNOLOGY*
O'Sullivan, C., Cahill, G., Murphy, J. A., Gear, W. K., Harris, J., Ade, P. A., Church, S. E., Thompson, K. L., Pryke, C., Bock, J., Bowden, M., Brown, M. L., Carlstrom, et al

2008; 51 (4): 277-286

- **C-band side-entry Ge quantum-well electroabsorption modulator on SOI operating at 1 V swing** *ELECTRONICS LETTERS*
Roth, J. E., Fidaner, O., Edwards, E. H., Schaevitz, R. K., Kuo, Y., Helman, N. C., Kamins, T. I., Harris, J. S., Miller, D. A.
2008; 44 (1): 49-U63
- **Tunable narrow-bandwidth source of THz radiation based on frequency down-conversion in periodically structured gallium arsenide** *Conference on Terahertz Technology and Applications*
Schaar, J. E., Vodopyanov, K. L., Kuo, P. S., Fejer, M. M., Lin, A., Yu, X., Harris, J. S., Bliss, D., Lynch, C., Kozlov, V. G., Hurlbut, W.
SPIE-INT SOC OPTICAL ENGINEERING.2008
- **Electronmodulation Spectroscopy of GaInNASb/GaAs Quantum Wells: The Conduction Band Offset and Effective Mass Issues** *Dilute III-V Nitride Semiconductors and Materials Systems*
Misiewicz, J., Kudrawiec, R., Gladysiewicz, M., Harris, J., S.
edited by Erol, A.
Springer Series in Materials Science Springer-Verlag, Berlin, Germany.2008
- **The Fermi level position in as-grown GaInNAS(Sb) quantum wells and layers studied by contactless electroreflectance** *Symposium on Novel Gain Materials and Devices Based on III-N-V Compounds held at the 2007 E-MRS Spring Meeting*
Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S., Motyka, M., Gladysiewicz, M., Misiewicz, J.
WILEY-VCH VERLAG GMBH.2008: 473-77
- **Magnetic Coupled Spin-torque Devices and Magnetic Ring Oscillator** *IEEE International Electron Devices Meeting*
Leem, L., Harris, J. S.
IEEE.2008: 159-162
- **Low-frequency noise characterization of near-IR VCSELs for functional brain imaging** *Conference on Photonic Therapeutics and Diagnostics IV*
Lee, T. T., Lim, P. G., Harris, J. S., Shenoy, K. V., Smith, S. J.
SPIE-INT SOC OPTICAL ENGINEERING.2008
- **GaInNASb/GaAs vertical cavity surface-emitting lasers (VCSELs): current challenges and techniques to realize multiple-wavelength laser arrays at 1.55 μm** *Conference on Vertical-Cavity Surface-Emitting Lasers XII*
Gobe, M., Bae, H. P., Sarmiento, T., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2008
- **Contactless electroreflectance approach to study the Fermi level position in GaInNAS/GaAs quantum wells** *JOURNAL OF APPLIED PHYSICS*
Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S., Motyka, M., Misiewicz, J.
2007; 102 (11)
- **Effects of different plasma species (atomic N, metastable N-2(*), and ions) on the optical properties of dilute nitride materials grown by plasma-assisted molecular-beam epitaxy** *APPLIED PHYSICS LETTERS*
Oye, M. M., Mattord, T. J., Hallock, G. A., Bank, S. R., Wistey, M. A., Reifsnider, J. M., Ptak, A. J., Yuen, H. B., Harris, J. S., Holmes, A. L.
2007; 91 (19)
- **GaAs optical parametric oscillator with circularly polarized and depolarized pump** *OPTICS LETTERS*
Kuo, P. S., Vodopyanov, K. L., Fejer, M. M., Yu, X., Harris, J. S., Bliss, D. F., Weyburne, D.
2007; 32 (18): 2735-2737
- **Recent progress on 1.55- μm dilute-nitride lasers** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
Bank, S. R., Bae, H., Goddard, L. L., Yuen, H. B., Wistey, M. A., Kudrawiec, R., Harris, J. S.
2007; 43 (9-10): 773-785
- **Ge-SiGe quantum-well waveguide photodetectors on silicon for the near-infrared** *IEEE PHOTONICS TECHNOLOGY LETTERS*
Fidaner, O., Okyay, A. K., Roth, J. E., Schaevitz, R. K., Kuo, Y., Saraswat, K. C., Harris, J. S., Miller, D. A.
2007; 19 (17-20): 1631-1633
- **High-indium-content InGaAs metal-oxide-semiconductor capacitor with amorphous LaAlO₃ gate dielectric** *APPLIED PHYSICS LETTERS*
Goel, N., Majhi, P., Tsai, W., Warusawithana, M., Schlom, D. G., Santos, M. B., Harris, J. S., Nishi, Y.
2007; 91 (9)
- **High transmission through ridge nano-apertures on vertical-cavity surface-emitting lasers** *OPTICS EXPRESS*

- Rao, Z., Hesselink, L., Harris, J. S.
2007; 15 (16): 10427-10438
- **Development of GaInNAsSb alloys: Growth, band structure, optical properties and applications** *PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS*
Harris, J. S., Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Jackrel, D., Pickett, E. R., Sarmiento, T., Goddard, L. L., Lordi, V., Gugov, T.
2007; 244 (8): 2707-2729
 - **Evanescence-coupled GaInNAsSb in-line fibre photodetectors** *IET OPTOELECTRONICS*
Yang, H., Khalili, A., Wistey, M., Harris, J. S.
2007; 1 (4): 175-177
 - **High-intensity bowtie-shaped nano-aperture vertical-cavity surface-emitting laser for near-field optics** *OPTICS LETTERS*
Rao, Z., Hesselink, L., Harris, J. S.
2007; 32 (14): 1995-1997
 - **Annealing condition optimization and electrical characterization of amorphous LaAlO₃/GaAs metal-oxide-semiconductor capacitors** *APPLIED PHYSICS LETTERS*
Choi, D., Harris, J. S., Warusawithana, M., Schlom, D. G.
2007; 90 (24)
 - **Temperature dependencies of annealing behaviors of GaInNAsSb/GaNAs quantum wells for long wavelength dilute-nitride lasers** *APPLIED PHYSICS LETTERS*
Bae, H. P., Bank, S. R., Yuen, H. B., Sarmiento, T., Pickett, E. R., Wistey, M. A., Harris, J. S.
2007; 90 (23)
 - **Dilute nitride GaInNAs and GaInNAsSb solar cells by molecular beam epitaxy** *JOURNAL OF APPLIED PHYSICS*
Jackrel, D. B., Bank, S. R., Yuen, H. B., Wistey, M. A., Harris, J. S.
2007; 101 (11)
 - **High-intensity C-shaped nanoaperture vertical-cavity surface-emitting laser with controlled polarization** *APPLIED PHYSICS LETTERS*
Rao, Z., Matteo, J. A., Hesselink, L., Harris, J. S.
2007; 90 (19)
 - **Molecular-beam epitaxy growth of device-compatible GaAs on silicon substrates with thin (similar to 80 nm) Si_{1-x}Gex step-graded buffer layers for high-kappa III-V metal-oxide-semiconductor field effect transistor applications** *24th North American Conference on Molecular Beam Epitaxy (NAMBE 2006)*
Oye, M. M., Shahrjerdi, D., Ok, I., Hurst, J. B., Lewis, S. D., Dey, S., Kelly, D. Q., Joshi, S., Mattord, T. J., Yu, X., Wistey, M. A., Harris, J. S., Holmes, et al
A V S AMER INST PHYSICS.2007: 1098-1102
 - **Optical modulator on silicon employing germanium quantum wells** *OPTICS EXPRESS*
Roth, J. E., Fidaner, O., Schaevitz, R. K., Kuo, Y., Kamins, T. I., Harris, J. S., Miller, D. A.
2007; 15 (9): 5851-5859
 - **Growth of GaAs with orientation-patterned structures for nonlinear optics** *14th International Conference on Molecular Beam Epitaxy (MBE XIV)*
Yu, X., Scaccabarozzi, L., Lin, A. C., Fejer, M. M., Harris, J. S.
ELSEVIER SCIENCE BV.2007: 163-167
 - **Integrated semiconductor optical sensors for cellular and neural imaging** *Biomedical Optics Topical Meeting of the Optical-Society-of-America*
Levi, O., Lee, T. T., Lee, M. M., Smith, S. J., Harris, J. S.
OPTICAL SOC AMER.2007: 1881-89
 - **Conduction band offset for Ga_{0.62}In_{0.38}N_xAs_{0.991-x}Sb_{0.009}/Ga_{Ny}As_{1-y}/GaAs systems with the ground state transition at 1.5-1.65 μ m** *APPLIED PHYSICS LETTERS*
Kudrawiec, R., Bank, S. R., Yuen, H. B., Bae, H., Wistey, M. A., Goddard, L. L., Harris, J. S.
2007; 90 (13)
 - **Fermi level shift in GaInNAsSb/GaAs quantum wells upon annealing studied by contactless electroreflectance** *APPLIED PHYSICS LETTERS*
Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S., Motyka, M., Misiewicz, J.
2007; 90 (6)

- **Electromodulation spectroscopy of interband transitions in GaInNAsSb/GaAs quantum wells with high indium content** *2nd International Workshop on Modulation Spectroscopy of Semiconductor Structures*
Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S., Motyka, M., Gladysiewicz, M., Misiewicz, J.
WILEY-VCH VERLAG GMBH.2007: 364–72
- **The influence of antimony on the optical quality of highly strained GaInNAs/GaAs QWs investigated by contactless electroreflectance** *2nd International Workshop on Modulation Spectroscopy of Semiconductor Structures*
Kudrawiec, R., Yuen, H. B., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S., Motyka, M., Gladysiewicz, M., Misiewicz, J.
WILEY-VCH VERLAG GMBH.2007: 543–46
- **Optical link on silicon employing Ge/SiGe quantum well structures** *20th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*
Fidaner, O., Okyay, A. K., Roth, J. E., Scheavitz, R. K., Kuo, Y., Saraswat, K. C., Harris, J. S., Miller, D. A.
IEEE.2007: 852–853
- **The Electrical Characterization of Molecular-Beam-Deposited LaAlO₃ on GaAs and its Annealing Effects**
Harris, J. S., Choi, D., Warusawithana, M., Chui, C., O., Chen, J., Tsai, W.
2007
- **GaIn (NAsSb): MBE growth, heterostructure and nanophotonic devices** *International J. Nanoscience*
Harris, J., S.
2007; 3-4 (6): 269-274
- **Terahertz wave generation in orientation-patterned GaAs using resonantly enhanced scheme**
Vodopyanov, K., L., Schaar, J., K., Kuo, P., S., Fejer, M., M., Yu, X., Harris, J., S.
2007
- **Optical Analogue to Electromagnetically Induced Transparency in Photonic Crystals, Simulation and Experiments** *Technical Digest OSA 2007 Slow and Fast Light, SWB2*
Harris, J., S., Pan, J., Sandhu, S., Huo, Y., Povinelli, M., L., Fejer, M., M.
2007
- **A highly stable evanescently-coupled hybrid fibre semiconductor laser design**
Khalili, A., Lim, X., H., Bae, H., Harris, J., S.
2007
- **Compact Semiconductor Bioluminescence Bio-sensors** *Technical Digest Frontiers in Optics, (Optical Society of America), paper JMD5*
O'Sullivan, T., Wechselberger, A., Levi, O., Harris, J.
2007
- **Development of GaInNAsSb alloys: Growth, band structure, optical properties and applications** *Frontiers in Molecular-Beam Epitaxy toward Novel Devices*
Harris, J., S., Kudrawiec, R., Yuen, H., B., Bank, S., R., Bae, H., P., Wistey, M., A.
edited by Grahn, H., Koch, R., Trampert, A.
Wiley VCH, Berlin, Germany.2007
- **The quantum confined Stark effect in Ge/SiGe quantum wells: An efficient electroabsorption mechanism for silicon-based applications** *4th IEEE International Conference on Group IV Photonics*
Roth, J. E., Fidaner, O., Schaevitz, R. K., Edwards, E. H., Kuo, Y., Kamins, T. I., Harris, J. S., Miller, D. A.
IEEE.2007: 178–180
- **Optical Characterization and Sensitivity Evaluation of Guided-Resonances in Photonic Crystal Slabs for Biosensing Applications** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference*
Levi, O., Lee, M. M., Zhang, J., Lousse, V., Brueck, S. R., Fan, S., Harris, J. S.
IEEE.2007: 993–994
- **Contactless electroreflectance of GaInNAsSb/GaAs single quantum wells with indium content of 8%-32%** *JOURNAL OF APPLIED PHYSICS*
Kudrawiec, R., Yuen, H. B., Motyka, M., Gladysiewicz, M., Misiewicz, J., Bank, S. R., Bae, H. P., Wistey, M. A., Harris, J. S.
2007; 101 (1)
- **New THz sources for bio-medical imaging** *Conference on Novel in - Plane Semiconductor Lasers VI*
Harris, J. S., Gu, A., Kim, S. M.

SPIE-INT SOC OPTICAL ENGINEERING.2007

- **Thermally induced relaxation in GaInNAsSb quantum well structures** *Symposium on Semiconductor Defect Engineering Materials, Synthetic Structures and Devices II held at the 2007 MRS Spring Meeting*
Pickett, E., Bank, S., Yuen, H., Bae, H., Sarmiento, T., Marshall, A., Harris, J.
MATERIALS RESEARCH SOCIETY.2007: 105–110
- **(GaIn)(NAsSb): MBE growth, heterostructure and nanophotonic devices** *13th International Symposium on Nanstructures - Physics and Technology*
Harris, J. S.
WORLD SCIENTIFIC PUBL CO PTE LTD.2007: 269–74
- **High-intensity bowtie nano-aperture Vertical-Cavity Surface-Emitting Laser for ultrahigh-density near-field optical data storage** *Topical Meeting on Optical Data Storage*
Rao, Z., Hesselink, L., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2007
- **Sensitivity analysis of a photonic crystal structure for index-of-refraction sensing** *Conference on Nanoscale Imaging, Spectroscopy, Sensing, and Actuation for Biomedical Applications IV*
Levi, O., Lee, M. M., Zhang, J., Lousse, V., Brueck, S. R., Fan, S., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2007
- **Enhanced second-harmonic generation in AlGaAs/AlxOy tightly confining waveguides and resonant cavities** *OPTICS LETTERS*
Scaccabarozzi, L., Fejer, M. M., Huo, Y., Fan, S., Yu, X., Harris, J. S.
2006; 31 (24): 3626-3628
- **Dichroic mirror embedded in a submicrometer waveguide for enhanced resonant nonlinear optical devices** *OPTICS LETTERS*
Scaccabarozzi, L., Fejer, M. M., Huo, Y., Fan, S., Yu, X., Harris, J. S.
2006; 31 (22): 3285-3287
- **Quantum-confined Stark effect in Ge/SiGe quantum wells on Si for optical modulators** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Kuo, Y., Lee, Y. K., Ge, Y., Ren, S., Roth, J. E., Kamins, T. I., Miller, D. A., Harris, J. S.
2006; 12 (6): 1503-1513
- **Long-wave IR chemical sensing based on difference frequency generation in orientation-patterned GaAs** *APPLIED PHYSICS B-LASERS AND OPTICS*
Bisson, S. E., Kulp, T. J., Levi, O., Harris, J. S., Fejer, M. M.
2006; 85 (2-3): 199-206
- **Contactless electroreflectance spectroscopy of Ga(In)NAs/GaAs quantum well structures containing Sb atoms** *Symposium on Current Trends in Optical and X-Ray Metrology of Advanced Materials for Nanoscale Devices held at the 2005 MRS Spring Meeting*
Kudrawiec, R., Gladysiewicz, M., Motyka, M., Misiewicz, J., Yuen, H. B., Bank, S. R., Wistey, M. A., Bae, H. R., Harris, J. S.
ELSEVIER SCIENCE BV.2006: 152–57
- **InGaAs metal-oxide-semiconductor capacitors with HfO2 gate dielectric grown by atomic-layer deposition** *APPLIED PHYSICS LETTERS*
Goel, N., Majhi, P., Chui, C. O., Tsai, W., Choi, D., Harris, J. S.
2006; 89 (16)
- **Terahertz-wave generation in quasi-phase-matched GaAs** *APPLIED PHYSICS LETTERS*
Vodopyanov, K. L., Fejer, M. M., Yu, X., Harris, J. S., Lee, Y., Hurlbut, W. C., Kozlov, V. G., Bliss, D., Lynch, C.
2006; 89 (14)
- **InSb and InSb : N multiple quantum dots** *APPLIED PHYSICS LETTERS*
Hatami, F., Kim, S. M., Yuen, H. B., Harris, J. S.
2006; 89 (13)
- **Mid-infrared luminescence of an InNAsSb/InAs single quantum well grown by molecular beam epitaxy** *APPLIED PHYSICS LETTERS*
Yuen, H. B., Kim, S. M., Hatami, F., Harris, J. S., Chin, A. H.
2006; 89 (12)
- **Neural stimulation with a carbon nanotube microelectrode array** *NANO LETTERS*
Wang, K., Fishman, H. A., Dai, H., Harris, J. S.

2006; 6 (9): 2043-2048

- **Dilute magnetic semiconductors based on InN** *International Symposium on Structure and Dynamics on the Nanometer Scale (SDNS)*
Ney, A., Rajaram, R., Harris, J. S., Parkin, S. S.
TAYLOR & FRANCIS LTD.2006: 785–91
- **Optoelectronic switches based on diffusive conduction** *JOURNAL OF APPLIED PHYSICS*
Demir, H. V., Koklu, F. H., Yairi, M. B., Harris, J. S., Miller, D. A.
2006; 100 (4)
- **An evanescent-coupling approach to making stable fiber-coupled semiconductor lasers** *APPLIED PHYSICS LETTERS*
Khalili, A., Bae, H., Harris, J. S.
2006; 89 (4)
- **Enhanced luminescence in GaInNAsSb quantum wells through variation of the arsenic and antimony fluxes** *APPLIED PHYSICS LETTERS*
Bank, S. R., Yuen, H. B., Bae, H., Wistey, M. A., Moto, A., Harris, J. S.
2006; 88 (24)
- **Interband transitions in GaN_{0.02}As_{0.98-x}Sb_x/GaAs (0 < x <= 0.11) single quantum wells studied by contactless electroreflectance spectroscopy** *PHYSICAL REVIEW B*
Kudrawiec, R., Gladysiewicz, M., Misiewicz, J., Yuen, H. B., Bank, S. R., Wistey, M. A., Bae, H. P., Harris, J. S.
2006; 73 (24)
- **Effects of strain on the optimal annealing temperature of GaInNAsSb quantum wells** *APPLIED PHYSICS LETTERS*
Yuen, H. B., Bank, S. R., Bae, H., Wistey, M. A., Harris, J. S.
2006; 88 (22)
- **Band gap discontinuity in Ga_{0.9}In_{0.1}N_{0.027}As_{0.973-x}Sb_x/GaAs single quantum wells with 0 <= x < 0.06 studied by contactless electroreflectance spectroscopy** *APPLIED PHYSICS LETTERS*
Kudrawiec, R., Motyka, M., Gladysiewicz, M., Misiewicz, J., Yuen, H. B., Bank, S. R., Bae, H., Wistey, M. A., Harris, J. S.
2006; 88 (22)
- **Overannealing effects in GaInNAs(Sb) alloys and their importance to laser applications** *APPLIED PHYSICS LETTERS*
Bank, S. R., Yuen, H. B., Bae, H., Wistey, M. A., Harris, J. S.
2006; 88 (22)
- **The role of antimony on properties of widely varying GaInNAsSb compositions** *JOURNAL OF APPLIED PHYSICS*
Yuen, H. B., Bank, S. R., Bae, H., Wistey, M. A., Harris, J. S.
2006; 99 (9)
- **Integrated photonic switches for nanosecond packet-switched optical wavelength conversion** *OPTICS EXPRESS*
Fidaner, O., Demir, H. V., Sabnis, V. A., Zheng, J. F., Harris, J. S., Miller, D. A.
2006; 14 (1): 361-368
- **Ge/SiGe quantum-confined stark modulators on silicon** *19th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*
Harris, J. S.
IEEE.2006: 903–904
- **A highly stable evanescently-coupled fiber semiconductor laser**
Khalili, A., Bae, H., Harris, J., S.
2006
- **Low-threshold CW 1.55- μ m GaAs-based lasers**
Harris, J., S., Bank, S., R., Bae, H., P., Yuen, H., B., Goddard, L., L., Wistey, M., A.
2006
- **A high-intensity nano-aperture vertical-cavity surface-emitting laser with controlled polarization**
Rao, Z., L., Matteo, J., A., Hesselink, L., Harris, J., S.
2006
- **Self-aligned via and trench for metal contact in III-V semiconductor devices** *J. Vac. Sci. Technol.*

- Zheng, J., F., Demir, H., V., Sabnis, V., A., Fidaner, O., Harris, J., S., Miller, D., A.B.
2006; 3 (24): 1117-122
- **Room-temperature continuous-wave 1.55 μm GaInNAsSb laser on GaAs** *Electron. Lett.*
Bank, S., R., Bae, H., Yuen, H., B., Wistey, M., A., Goddard, L., L., Harris, J., S.
2006; 3 (42): 156-7
 - **Photoluminescence and electroabsorption in GaNAs/GaAsSb heterojunctions** *Electron. Lett.*
Yang, H., Lordi, V., Harris, J., S.
2006; 1 (42): 52-4
 - **Very Low-Threshold 1.55- μm Dilute-Nitride Lasers**
Bank, S., R., Bae, H., P., Goddard, L., L., Yuen, H., B., Wistey, M., A., Harris, J., S.
2006
 - **New light from gallium arsenide: micro-structured GaAs for mid-IR and THz-wave generation**
Vodopyanov, K., L., Schaar, J., E., Kuo, P., S., Fejer, M., M., Yu, X., Harris, J., S.
2006
 - **Ge/SiGe quantum confined Stark effect modulators on silicon**
Harris, J., S., Kuo, Y., H., Miller, S., A.B.
2006
 - **Temperature dependent magnetic properties of the GaAs substrate of spin-LEDs** *J. Phys.: Con. Mat.*
Ney, A., Harris, J., S., Parkin, S., S.P.
2006; 17 (18): 4397-406
 - **Structural and magnetic properties of Cr and Mn doped InN** *J. Mag. Magnetic Materials*
Ney, A., Rajaram, R., Arenholz, E., Harris, J., S., Samant, M., Farrow, R., F.C.
2006; 1 (300): 7-11
 - **High-power source of THz radiation based on orientation-patterned GaAs pumped by a fiber laser** *Optics Express*
Imeshev, G., Fermann, M., E., Vodopyanov, K., L., Fejer, M., M., Yu, X., Harris, J., S.
2006: 4439-444
 - **GaInNAsSb/GaAs vertical cavity surface emitting lasers at 1534 nm** *Electron. Lett.*
Harris, J., S., Wistey, M., A., Bank, S., R., Bae, H., Yuen, H., B., Pickett, E., R.
2006; 5 (42): 282-3
 - **Calcium impurities in enhanced-depletion-width GaInNAs grown by molecular-beam epitaxy** *J. Vac. Sci. Technol.*
Harris, J., S., Ptak, A., J., Friedman, D., J., Kurtz, S., Reedy, R., C., Young, M.
2006; 3 (24): 1540-43
 - **Monolithic GaInNAsSb vertical cavity surface emitting lasers at 1534 nm**
Wistey, M., A., Bank, S., R., Bae, H., Yuen, H., B., Goddard, L., L., Harris, J., S.
2006
 - **Investigation of nitrogen induced closely coupled Sb based quantum dots for infrared sensors application**
Kim, S., M., Hatami, F., Yuen, H., B., Harris, J., S.
2006
 - **GaAs optical parametric oscillator with a circularly polarized pump**
Kuo, P., S., Vodopyanov, K., L., Fejer, M., M., Yu, X., Lin, A., C., Harris, J., S.
2006
 - **0.8-3.5 THz source based on fiber-laser pumped orientation-patterned GaAs**
Harris, J., S., Vodopyanov, K., L., Imeshev, G., Fermann, M., E., Fejer, M., M.
2006
 - **Standing-wave Fourier transform interferometer with an HPT** *IEEE Photon. Techn. Lett.*
Fu, J., X., Yu, X., Zhang, B., Harris Jr., J., S.

2006; 1 (18): 40-2

- **Guided-resonance in photonic crystal slabs for biosensing applications**
Levi, O., Suh, W., Lee, M., M., Solgaard, O., Harris, J., S.
2006
- **Structural and magnetic behavior of transition metal doped InN grown by molecular beam epitaxy** *J. Vac. Sci. Techn.*
Rajaram, R., Ney, A., Farrow, R., F.C., Parkin, S., S.P., Solomon, G., S., Harris Jr., J., S.
2006; 3 (B24): 1644-8
- **Green emission from InP-GaP quantum-dot light-emitting diodes** *IEEE Photon. Techn. Lett.*
Hatami, F., Masselink, W., T., Lordi, V., Harris, J., S.
2006; 18: 895-897
- **Tunable THz source based on frequency conversion in quasi-phase-matched GaAs**
Vodopyanov, K., L., Schaar, J., Fejer, M., M., Yu, X., Harris, J., S., Lee, Y., S.
2006
- **Temperature and Humidity Dependent Reliability Analysis of RGB LED Chip**
Fu, J., X., Souri, S., Harris Jr., J., S.
2006
- **Nonlinear optical effects in In_xGa(1-x)As quantum systems for saturable absorbers**
Aldaz, R., I., Wiemer, M., W., Miller, D., A.B., Harris, J., S.
2006
- **Dilute nitride lasers and photodetectors**
Harris, J., S.
2006
- **Photoreflectance spectroscopy of a Ga_{0.62}In_{0.38}N_{0.026}As_{0.954}Sb_{0.02}/GaAs single quantum well tailored at 1.5 μm** *Solid State Communic.*
Harris, J., S., Kudrawiec, R., Gladysiewicz, M., Misiewicz, J., Yuen, H., B., Bank, S., R.
2006; 1 (137): 138-141
- **Colour-tunable light-emitting diodes based on InP/GaP nanostructures** *Nanotechnology*
Hatami, F., Masselink, W., T., Harris, J., S.
2006; 15 (17): 3703-06
- **Biomedical terahertz imaging with a quantum cascade laser** *Appl. Phys. Lett.*
Kim, S., M., Hatami, F., Harris, J., S., Kurian, A., W., Ford, J., King, D.
2006; 15 (88): 1539031-3
- **Photoreflectance spectroscopy of a Ga_{0.62}In_{0.38}N_{0.026}As_{0.954}Sb_{0.02}/GaAs single quantum well tailored at 1.5 μm** *SOLID STATE COMMUNICATIONS*
Kudrawiec, R., Gladysiewicz, M., Misiewicz, J., Yuen, H. B., Bank, S. R., Wistey, M. A., Bae, H. P., Harris, J. S.
2006; 137 (3): 138-141
- **Integrated semiconductor optical sensors for chronic, minimally-invasive imaging of brain function** *28th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society*
Lee, T. T., Levi, O., Cang, J., Kaneko, M., Stryker, M. P., Smith, S. J., Shenoy, K. V., Harris, J. S.
IEEE.2006: 2443–2446
- **GaInNAsSb solar cells grown by molecular beam epitaxy** *4th World Conference on Photovoltaic Energy Conversion*
Jackrel, D., Ptak, A., Bank, S., Yuen, H., Wistey, M., Friedman, D., Kurtz, S., Harris, J. S.
IEEE.2006: 783–786
- **Optical parametric generation of a mid-infrared continuum in orientation-patterned GaAs** *OPTICS LETTERS*
Kuo, P. S., Vodopyanov, K. L., Fejer, M. M., Simanovskii, D. M., Yu, X., Harris, J. S., Bliss, D., Weyburne, D.
2006; 31 (1): 71-73
- **Germanium electroabsorption devices on silicon for optical interconnects** *Conference on Silicon Photonics*
Kuo, Y., Miller, D. A., Harris, J. S.

SPIE-INT SOC OPTICAL ENGINEERING.2006

- **Comparative analysis of bio-medical imaging at 3.7 terahertz with a high power quantum cascade laser** *19th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*
Kim, S. M., Hatami, F., Gu, A., Kurian, A. W., Ford, J., Harris, J. S., Scalari, G., Faist, J.
IEEE.2006: 231–232
- **A C-shaped nanoaperture Vertical-Cavity Surface-Emitting Laser for high-density near-field optical data storage** *Conference on Vertical-Cavity Surface-Emitting Lasers X*
Rao, Z., Matteo, J. A., Hesselink, L., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Compact standing-wave Fourier-transform interferometer with harmonic spectral analysis** *Conference on Coherence Domain Optical Methods and Optical Coherence Tomography in Biomedicine X*
Fu, J., Yu, X., Zhang, B., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Bio-medical imaging with a terahertz quantum cascade laser** *Conference on Nanobiophotonics and Biomedical Applications III*
Kim, S. M., Hatami, F., Kurian, A. W., Ford, J., Harris, J. S., Scalari, G., Giovannini, M., Hoyler, N., Faist, J., Harris, G.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Integrated biomedical nanosensor using guided resonance in photonic crystal structures** *Conference on Nanobiophotonics and Biomedical Applications III*
Levi, O., Suh, W., Lee, M. M., Zhang, J., Brueck, S. R., Fan, S., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Integrated semiconductor optical sensors for chronic, minimally-invasive imaging of brain function.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference*
Lee, T. T., Levi, O., Cang, J., Kaneko, M., Stryker, M. P., Smith, S. J., Shenoy, K. V., Harris, J. S.
2006; 1: 1025-1028
- **Novel on-chip fully monolithic integration of GaAs devices with completely fabricated SiCMOS circuits** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Ma, K., Chen, R., Miller, D. A., Harris, J. S.
2005; 11 (6): 1278-1283
- **Strong quantum-confined Stark effect in germanium quantum-well structures on silicon** *NATURE*
Kuo, Y. H., Lee, Y. K., Ge, Y. S., Ren, S., Roth, J. E., Kamins, T. I., Miller, D. A., Harris, J. S.
2005; 437 (7063): 1334-1336
- **Photoluminescence from as-grown and annealed GaN_{0.027}As_{0.863}Sb_{0.11}/GaAs single quantum wells** *JOURNAL OF APPLIED PHYSICS*
Kudrawiec, R., Motyka, M., Misiewicz, J., Yuen, H. B., Bank, S. R., Wistey, M. A., Bae, H. P., Harris, J. S.
2005; 98 (6)
- **Arsenic surface segregation during in situ doped silicon and Si_{1-x}Gex molecular beam epitaxy** *JOURNAL OF CRYSTAL GROWTH*
Liu, X., Tang, Q., Harris, J. S., Kamins, T. I.
2005; 281 (2-4): 334-343
- **Effects of antimony and ion damage on carrier localization in molecular-beam-epitaxy-grown GaInNAs** *22nd North American Conference on Molecular Beam Epitaxy (NAMBE 2004)*
Bank, S. R., Wistey, M. A., Yuen, H. B., Lordi, V., Gambin, V. F., Harris, J. S.
A V S AMER INST PHYSICS.2005: 1320–23
- **The opportunities, successes and challenges for GaInNAsSb** *13th International Conference on Molecular Beam Epitaxy (MBE XII)*
Harris, J. S.
ELSEVIER SCIENCE BV.2005: 3–17
- **Monolithically integrated semiconductor fluorescence sensor for microfluidic applications** *SENSORS AND ACTUATORS B-CHEMICAL*
Thrush, E., Levi, O., Cook, L. J., Deich, J., Kurtz, A., Smith, S. J., Moerner, W. E., Harris, J. S.
2005; 105 (2): 393-399
- **Interference effects in electromodulation spectroscopy applied to GaAs-based structures: A comparison of photoreflectance and contactless electroreflectance** *APPLIED PHYSICS LETTERS*

-
- Kudrawiec, R., Sitarek, P., Misiewicz, J., Bank, S. R., Yuen, H. B., Wistey, M. A., Harris, J. S.
2005; 86 (9)
- **Conductance fluctuations and partially broken spin symmetries in quantum dots** *Phys. Rev. B*
Zumbuhl, D., M., Miller, J., B., Marcus, C., M., Goldhaber-Gordon, D., Harris, J., S., Campman, K.
2005; 8 (72): 81305
 - **Reconfigurable magnetologic computing using the spin flop switching of a magnetic random access memory cell** *Appl. Phys. Lett.*
Ney, A., Harris, J., S.
2005; 11 (86): 13502-1-3
 - **Interference effects in electromodulation spectroscopy applied to GaAs-based structures: A comparison of photoreflectance and contactless electroreflectance** *Appl. Phys. Lett.*
Harris, J., S., Kudrawiec, R., Sitarek, P., Misiewicz, J., Bank, S., R., Yuen, H., B.
2005; 86 (091115-17)
 - **Linear electro-optic conversion of sampled voltage signals using a low-temperature-grown GaAs MSM and a multiple quantum well modulator**
Chin, H., Urata, U., Chen, R., Miller, D., A. B., Ma, K., Harris Jr., J., S
2005
 - **Investigation of GaNAsSb/GaAs and GaInNAsSb/GaNAs/GaAs Band Offsets**
Harris, J., S., Yuen, H., B., Kudrawiec, R., Ryczko, K., Bank, S., R., Wistey, M., A.
2005
 - **Using beam flux monitor as Langmuir probe for plasma-assisted molecular beam epitaxy** *J. Vac. Sci. Techn. B*
Wistey, M., A., Bank, S., R., Yuen, H., B., Harris, J., S., Oye, M., M., Holmes, A., L.
2005; 3 (23): 460-4
 - **Temperature Independence of the Spin Injection Efficiency of a MgO-based Tunnel Spin Injector** *Appl. Phys. Lett.*
Salis, G., Wang, R., Jiang, X., Shelby, R., M., Bank, S., R., Harris, J., S.
2005; 87: 2625031-3
 - **Photoluminescence from as-grown and annealed GaN_{0.027}As_{0.863}Sb_{0.11}/GaAs single quantum wells** *J. Appl. Phys.*
Harris, J., S., Kudrawiec, R., Motyka, M., Misiewicz, J., Yuen, H., B., Bank, S., R.
2005; 6 (98): 063527-31
 - **MSM-based integrated CMOS wavelength-tunable optical receiver** *IEEE Photon. Techn. Lett.*
Chen, R., Chin, H., Miller, D., A. B., Ma, K., Harris, J., S.
2005; 6 (17): 1271-3
 - **In situ p-n junctions and gated devices in titanium-silicide nucleated si nanowires** *Electrochem Solid-State Lett.*
Tang, Q., Kamins, T., I., Liu, X., Grupp, D., E., Harris, J., S.
2005; 8 (8): G204-8
 - **Improved Optical Quality from GaNAsSb in the Dilute Sb Limit** *J. Appl. Phys.*
Harris, J., S., Yuen, H., B., Seong, M., J., Kudrawiec, R., Yoon, S., Bank, S., R.
2005; 11 (97): 113510-1-5
 - **A single transverse-mode monolithically integrated long vertical-cavity surface-emitting laser** *IEEE Photon. Techn. Lett.*
Wiemer, M., W., Aldaz, R., I., Miller, D., A. B., Harris, J., S.
2005; 7 (17): 1366-8
 - **MBE grown GaInNAs solar cells for multijunction applications**
Harris, J., S., Jackrel, D., Yuen, H., Fu, J., Bank, S., Yu, X.
2005
 - **Fabrication and characterization of tightly confining AlGaAs waveguides and microcavities for nonlinear optical applications**
Harris, J., S., Scaccabarozzi, L., Wang, Z., Yu, X., Lee, M., M., Lau, W., T.
2005

- **Extended InGaAs/InGaAs quantum structures for near infrared photodetection beyond 1.9 μm**
Fu, J., Yu, X., Kuo, Y., H., Harris Jr., J., S.
2005
- **InP based double heterojunction phototransistor with graded emitter-base junction and base-collector junction**
Fu, J., X., Harris Jr., J., S.
2005
- **Highly stable in-line semiconductor fiber laser**
Khalili, A., Harris Jr., J., S.
2005
- **Differential Gain and Non-linear Gain Compression of GaInNAsSb/GaAs Lasers at 1.5 μm**
Goddard, L., Bank, S., Wistey, M., Yuen, H., Bae, H., Harris, J., S.
2005
- **Red light-emitting diodes based on InP/GaP quantum dots** *J. Appl. Phys.*
Hatami, F., Lordi, V., Harris, J., S., Kostial, H., Masselink, W., T.
2005; 9 (97): 96106-1-3
- **On the temperature sensitivity of 1.5- μm GaInNAsSb lasers** *IEEE J. Select. Topics Quan. Electron.*
Bank, S., R., Goddard, L., L., Wistey, M., A., Yuen, H., B., Harris, J., S.
2005; 5 (11): 1089-98
- **Increase in spin injection efficiency of a CoFe/MgO(100) tunnel spin injector with thermal annealing** *Appl. Phys. Lett.*
Harris, J., S., Wang, R., Jiang, X., Shelby, R., M., Macfarlane, R., M., Parkin, S., S. P.
2005; 5 (86): 052901-3
- **Highly spin-polarized room-temperature tunnel injector for semiconductor spintronics using MgO(100)** *Phys. Rev. Lett.*
Jiang, X., Wang, R., Shelby, R., M., Macfarlane, R., M., Bank, S., R., Harris, J., S.
2005; 5 (94): 056601/1-4
- **Efficient continuous wave second harmonic generation pumped at 1.55 μm in quasi-phase-matched AlGaAs waveguides** *Optics Express*
Yu, X., Scaccabarozzi, L., Harris, J., S., Kuo, P., S., Fejer, M., M.
2005; 26 (13): 10742-10753
- **(GaIn)(NAsSb): the challenges for long wavelength communications devices**
Harris Jr., J., S.
2005
- **Investigation of nitrogen flow variation into a radio frequency plasma cell on plasma properties and GaInNAs grown by molecular beam epitaxy** *J. Vac. Sci. Techn. B*
Yuen, H., B., Wistey, M., A., Bank, S., R., Bae, H., P., Harris, J., S.
2005; 3 (23): 1328-32
- **Spectral shaping of electrically controlled MSM-based tunable photodetectors** *IEEE Photon. Techn. Lett.*
Chen, R., Fu, J., X., Miller, D., A.B., Harris, J., S.
2005; 10 (17): 2158-60
- **Self-aligning planarization and passivation for integration applications in III-V semiconductor devices** *IEEE Trans Semiconductor Manufacturing*
Demir, H., V., Zheng, J., F., Sabnis, V., A., Fidaner, O., Hanberg, J., Harris, J., S.
2005; 1 (18): 182-89
- **Protecting wafer surface during plasma ignition using an arsenic cap** *J. Vac. Sci. Techn. B*
Wistey, M., A., Bank, S., R., Yuen, H., B., Goddard, L., L., Gugov, T., Harris, J., S.
2005; 3 (23): 1324-7
- **Novel electrically controlled rapidly wavelength selective photodetection using MSMs** *IEEE J. Selected Topics in Quantum Electron.*
Chen, R., Miller, D., A. B., Ma, K., Harris, J., S.
2005; 1 (11): 184-89

- **Molecular-beam epitaxy growth of low-threshold cw GaInNAsSb lasers at 1.5 μm** *J. Vac. Sci. Techn. B*
Bank, S., R., Wistey, M., A., Yuen, H., B., Goddard, L., L., Bae, H., P., Harris, J., S.
2005; 3 (23): 1324-27
- **Mn- and Cr-doped InN: A promising diluted magnetic semiconductor material** *J. Superconductivity*
Ney, A., Rajaram, R., Farrow, R., F. C., Harris, J., S., Parkin, S., S. P.
2005; 1 (18): 41-4
- **Ion damage effects from negative deflector plate voltages during the plasma-assisted molecular-beam epitaxy growth of dilute nitrides** *Appl. Phys. Lett.*
Harris, J., S., Oye, M., M., Wistey, M., A., Reifsnider, J., M., Agarwal, S., Mattord, T., J.
2005; 22 (86): 221902-1-3
- **Intimate monolithic integration of chip-scale photonic circuits** *IEEE J. Sel. Topics Quant. Electron.*
Sabnis, V., A., Demir, H., V., Fidaner, O., Zheng, J., F., Harris, J., S., Miller, D., A. B.
2005; 6 (11): 1255-65
- **Growth and magnetism of Cr-doped InN** *Appl. Phys. Lett.*
Rajaram, R., Ney, A., Farrow, R., F. C., Solomon, G., Harris Jr., J., S., Parkin, S., S. P.
2005; 6 (87): 1725111-3
- **Effects of growth temperature on the structural and optical properties of 1.55 μm GaInNAsSb quantum wells grown on GaAs** *Appl. Phys. Lett.*
Bank, S., R., Yuen, H., B., Wistey, M., A., Lordi, V., Bae, H., P., Harris, J., S.
2005; 2 (87): 21908-1-3
- **Multifunctional integrated photonic switches** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
Demir, H. V., Sabnis, V. A., Fidaner, O., Zheng, J. F., Harris, J. S., Miller, D. A.
2005; 11 (1): 86-96
- **High-performance GaInNAsSb/GaAs lasers at 1.5 μm**
Goddard, L., L., Bank, S., R., Wistey, M., A., Yuen, H., B., Harris Jr., J., S.
2005
- **Fabrication of a carbon nanotube protruding electrode array for a retinal prosthesis**
Wang, K., Dai, H., Fishman, H., A., Harris Jr., J., S.
2005
- **1.55 μm GaInNAsSb lasers on GaAs**
Bank, S., Wistey, M., Goddard, L., Yuen, H., Bae, H., Harris Jr., J., S.
2005
- **Side-coupled fibre semiconductor laser** *Electron. Lett.*
Khalili, A., Harris, J., S.
2005; 20 (41): 1128-30
- **Recombination, gain, band structure, efficiency, and reliability of 1.5 μm GaInNAsSb/GaAs lasers** *J. Appl. Phys.*
Goddard, L., L., Bank, S., R., Wistey, M., A., Yuen, H., B., Rao, Z., Harris Jr., J., S.
2005; 8 (97): 083101-16
- **Photoreflectance and photoluminescence investigations of a step-like GaInNAsSb/GaAsN/GaAs quantum well tailored at 1.5 μm : The energy level structure and the Stokes shift** *J. Appl. Phys.*
Harris, J., S., Kudrawiec, R., Yuen, H., B., Ryczko, K., Misiewicz, J., Bank, S., R.
2005; 97: 53515
- **Nearest-neighbor distributions in Ga(1-x)InxNyAs(1-y) and Ga(1-x)InxNyAs(1-y-z)Sbz thin films upon annealing** *Phys. Rev. B.*
Lordi, V., Yuen, H., B., Bank, S., R., Wistey, M., A., Harris, J., S., Friedrich, S.
2005; 12 (71): 125309-18
- **Effects of antimony and ion damage on carrier localization in molecular-beam-epitaxy-grown GaInNAs** *J. Vac. Sci. Techn. B*
Bank, S., R., Wistey, M., A., Yuen, H., B., Lordi, V., Gambin, V., Harris, J., S.
2005; 3 (23): 1320-3

- **Comparison of GaNAsSb and GaNAs as quantum-well barriers for GaInNAsSb optoelectronic devices operating at 1.3-1.55 μm** *JOURNAL OF APPLIED PHYSICS*
Yuen, H. B., Bank, S. R., Wistey, M. A., Harris, J. S., Moto, A.
2004; 96 (11): 6375-6381
- **Optical parametric oscillation in quasi-phase-matched GaAs** *OPTICS LETTERS*
Vodopyanov, K. L., Levi, O., Kuo, P. S., Pinguet, T. J., Harris, J. S., Fejer, M. M., Gerard, B., Becouarn, L., Lallier, E.
2004; 29 (16): 1912-1914
- **Use of transmission electron microscopy in the characterization of GaInNAs(Sb) quantum well structures grown by molecular beam epitaxy** *21st North American Conference on Molecular Beam Epitaxy (NAMBE 2003)*
Gugov, T., Gambin, V., Wistey, M., Yuen, H., Bank, S., Harris, J. S.
A V S AMER INST PHYSICS.2004: 1588-92
- **Dual-diode quantum-well modulator for C-band wavelength conversion and broadcasting** *OPTICS EXPRESS*
Demir, H. V., Sabnis, V. A., Fidaner, O., Harris, J. S., Miller, D. A., Zheng, J. F.
2004; 12 (2): 310-316
- **Greater than 10(6) optical isolation in integrated optoelectronic fluorescence sensor.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference*
Thrush, E., Levi, O., Cook, L., Smith, S., Harris, J.
2004; 3: 2080-2081
- **A broadly tunable high-resolution IR cavity ring-down spectrometer based on difference frequency generation in orientation-patterned GaAs**
Bisson, S., E., Kulp, T., J., Levi, O., Harris, J., Fejer, M., M.
2004
- **Photoelectronic analog-to-digital conversion: Sampling and quantizing at 100 Gs/s** *IEEE Trans. Microwave Theory Techn.*
Harris, J., S., Ioakeimidi, K., Leheny, R., F., Gradinaru, S., Bolton, P., R., Aldana, R.
2004; 1 (53): 336-42
- **Monolithically-integrated long vertical cavity surface emitting laser incorporating a concave micromirror on a glass substrate** *Optics Express*
Aldaz, R., I., Wiemer, M., W., Miller, D., A. B., Harris Jr., J., S.
2004; 17 (12): 3967-71
- **Low-threshold continuous-wave 1.5- μm GaInNAsSb lasers grown on GaAs** *IEEE J. Quantum Electron.*
Bank, S., R., Wistey, M., A., Goddard, L., L., Yuen, H., B., Lordi, V., Harris, J., S.
2004; 6 (40): 656-64
- **A new route to zero-barrier metal source/drain MOSFETs** *IEEE Trans. Nanotechnology*
Connelly, D., Faulkner, C., Grupp, D., E., Harris, J., S.
2004; 1 (3): 98-104
- **Monolithic integration of GaAs devices with completely fabricated Si CMOS**
Ma, K., Chen, R., Miller, D., A. B., Harris Jr., J., S.
2004
- **Low threshold, CW, room temperature 1.50 μm GaAs-based lasers**
Bank, S., R., Wistey, M., A., Yuen, H., B., Goddard, L., L., Harris Jr., J., S.
2004
- **Integrated semiconductor bio-fluorescence sensor integrated on micro-fluidic platform**
Thrush, E., Levi, O., Cook, L., J., Harris Jr., J., S., Smith, S., J
2004
- **GaNAs/GaAsSb type II active regions for 1.3-1.5 μm operation**
Yang, H., Lordi, V., Harris, J., S.
2004
- **Growth of III-V Nitrides by Pulsed Laser Deposition** *(Optoelectronic Properties of Semiconductors and Superlattices; III-V Nitride Semiconductors: Growth and Substrate Issues*

Huang, T., F., Harris Jr., J., S.
edited by Omar, M., Ian, M., Breach, F. G.
2004

- **Widely tunable Al₂O₃-GaAs DBR filters with variable tuning characteristics** *IEEE J. Selected Topics Quantum Electronics*
Lin, C., C., Fu, J., X., Harris, J., S.
2004; 3 (10): 614-21
- **Integrated semiconductor vertical-cavity surface-emitting lasers and PIN photodetectors for biomedical fluorescence sensing** *IEEE J Quantum Electron.*
Harris, J., S., Thrush, E., Levi, O., Ha, W., Carey, G., Cook, L., J.
2004; 5 (40): 491-8
- **High-speed, optical switching based on diffusive conduction in an optical waveguide with surface-normal optical control** *J. Appl Phys.*
Sabnis, V., A., Demir, H., V., Yairi, M., B., Harris Jr., J., S., Miller, D., A. B.
2004; 5 (95): 2258-63
- **High-performance 1.5 μm GaInNAsSb lasers grown on GaAs** *Electron. Lett.*
Bank, S., R., Wistey, M., A., Goddard, L., L., Yuen, H., B., Bae, H., P., Harris, J., S.
2004; 19 (40): 1186-7
- **High-frequency modulation characteristics of 1.3- μm InGaAs quantum dot lasers** *IEEE Photon. Technol. Lett.*
Kim, S., M., Wang, Y., Keever, M., Harris, J., S.
2004; 2 (16): 377-379
- **Side-coupled in-line fiber-semiconductor laser**
Khalili, A., Wistey, M., A., Harris Jr., J., S.
2004
- **Novel scalable wavelength-converting crossbar**
Demir, H., V., Sabnis, V., A., Fidaner, O., Harris Jr., J., S., Miller, D., A. B., Zheng, J., F.
2004
- **Monolithically integrated long vertical cavity surface laser incorporating a concave micromirror on a glass substrate**
Aldaz, R., I., Wiemer, M., W., Miller, D., A. B., Harris Jr., J., S.
2004
- **GaInNAs(Sb) long wavelength communications lasers**
Harris, J., S., S., J., S., M., R., Bank, H., A., Wistey
2004
- **Electrically-reconfigurable integrated photonic switches**
Fidaner, O., Demir, H., V., Sabnis, V., A., Harris Jr., J., S.
2004
- **The temperature sensitivity of GaAs-based 1.5 μm GaInNAsSb lasers**
Bank, S., R., Goddard, L., L., Wistey, M., A., Yuen, H., B., Harris Jr., J., S.
2004
- **Measurements of intrinsic properties of high power CW single quantum well GaInNAsSb/GaAs lasers at 1.5 μm**
Goddard, L., L., Bank, S., R., Wistey, M., A., Yuen, H., B., Harris Jr., J., S.
2004
- **GaInNAs and GaInNAsSb Long Wavelength Lasers, Chapter** *Physics and Applications of Dilute Nitrides*
Harris Jr., J., S.
edited by Buyanova, I., Chen, W.
Taylor and Francis, London, U. K. 2004: 395-433
- **Low-temperature growth of GaAs on Si used for ultrafast photoconductive switches** *IEEE J. Quantum Electron.*
Ma, K., Urata, R., Miller, D., A. B., Harris, J., S.
2004; 6 (40): 800-5

- **GaInNAs(Sb) vertical-cavity surface-emitting lasers at 1.460 μm** *J. Vac. Sci. Technol. B*
Wistey, M., A., Bank, S., R., Yuen, H., B., Goddard, L., L., Harris, J., S.
2004; 3 (22): 1562-64
- **Continuous-wave operation of GaInNAsSb distributed feedback lasers at 1.5 μm** *Electron. Lett.*
Harris, J., S., Gollub, D., Kamp, M., Forchel, A., Seufert, J., Bank, S., R.
2004; 23 (40): 1487-8
- **Comparison of GaNAsSb and GaNAs as Quantum Well Barriers for GaInNAsSb Optoelectronic Devices Operating at 1.3-1.55 μm** *J. Appl. Phys.*
Yuen, H., B., Bank, S., R., Wistey, M., A., Harris Jr., J., S., Moto, A.
2004; 11 (96): 6375-81
- **Structural characterization of molecular beam epitaxy grown GaInNAs and GaInNAsSb quantum wells by transmission electron microscopy**
Gugov, T., Wistey, M., Yuen, H., Bank, S., Harris Jr., J., S.
2004
- **Reduced mono-molecular recombination in GaInNAsSb/GaAs lasers at 1.5 μm**
Goddard, L., L., Bank, S., R., Wistey, M., S., Yuen, H., B., Bae, H., P., Harris Jr., J., S.
2004
- **Novel planarization and passivation in the integration of III-V semiconductor devices**
Zheng, J., F., Hanberg, P., J., Demir, H., V., Sabnis, V., A., Fidaner, O., Harris Jr., J., S.
2004
- **Electroabsorption of GaInNAs and GaInNAsSb quantum wells at 1300 and 1550 nm**
Lordi, V., Yuen, H., B., Bank, S., R., Wistey, M., A., Harris Jr., J., S.
2004
- **The Use of Transmission Electron Microscopy (TEM) in the Characterization of GaInNAs(Sb) Quantum Well Structures Grown by MBE** *J. Vac. Sci. Technol. B*
Gugov, T., Gambin, V., Wistey, M., Yuen, H., Bank, S., Harris Jr., J., S.
2004; 3 (22): 1588-92
- **Multispectral operation of self-assembled InGaAs quantum-dot infrared photodetectors** *Appl. Phys. Lett.*
Kim, S., M., Harris, J., S.
2004; 18 (85): 4154-56
- **Laser background characterization in a monolithically integrated bio-fluorescence sensor**
Harris, J., S., Thrush, E., Levi, O., Cook, L., J., Deich, J., Smith, S., J
2004
- **Tightly confining AlGaAs waveguides and microcavities for optical frequency conversion** *Conference on Integrated Optics - Devices, Materials and Technology VIII*
Scaccabarozzi, L., Wang, Z., Yu, X. J., Lau, W. T., Yanik, M. F., Fan, S. H., Fejer, M. M., Harris, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.2004: 111-119
- **Scalable wavelength-converting crossbar switches.** *IEEE Photon. Techn. Lett.*
Demir, H., V., Sabnis, V., A., Zheng, J., F., Fidaner, O., Harris Jr., J., S., B.Miller, D., A.
2004; 10 (16): 2305-7
- **Quantum-confined Stark effect of GaInNAs(Sb) quantum wells at 1300-1600 nm** *Appl. Phys. Lett.*
Lordi, V., Yuen, H., B., Bank, S., R., Harris, J., S.
2004; 6 (85): 902-4
- **Orbital effects of in-plane magnetic fields probed by mesoscopic conductance fluctuations** *Phys. Rev. B*
Zumbuhl, D., M., Miller, J., B., Marcus, C., M., Fal'ko, V., I., Jungwirth, T., Harris, J., S.
2004; 12 (69): 121305
- **Optically-controlled electroabsorption modulators for unconstrained wavelength conversion** *Appl. Phys. Lett.*
Sabnis, V., A., Demir, H., V., Fidaner, O., Harris Jr., J., S., Miller, D., A. B., Zheng, J., F.

2004; 4 (84): 469-471

- **Nonradiative recombination centers in Ga(As,N) and their annealing behavior studied by Raman spectroscopy** *Appl. Phys. Lett.*
Ramsteiner, M., Jiang, D., S., Harris, J., S., Ploog, K., H.
2004; 11 (84): 1859-61
- **Fabrication and characterization of a carbon nanotube microelectrode array for retinal prostheses** *Investigative Ophthalmology & Visual Science* 45
Wang, K., Dai, H., Leng, T., Mehenti, N., Z., Harris, J., S., Fishman, H., A.
2004; suppl.2 (45): U379
- **The role and suppression of carrier leakage in 1.5 μm GaInNAsSb/GaAs lasers**
M., S., R., H., A., Wistey, L., B., Yuen, J., L., Goddard, Harris, S.
2004
- **Progress towards high power 1.5 μm GaInNAsSb/GaAs lasers for Raman amplifiers**
Bank, S., R., Wistey, M., A., Yuen, H., B., Goddard, L., L., Harris Jr., J., S.
2004
- **Photodiode-driven quantum-well modulators for C-band wavelength conversion and broadcasting**
Demir, H., V., Fidaner, O., Sabnis, V., A., Harris, J., S., Miller, D., A. B., Zheng, J., F.
2004
- **Novel electrically controlled rapidly wavelength selective photodetection using MSMs**
Chen, R., Miller, D., A. B., Ma, K., Harris Jr., J., S.
2004
- **Multi-spectral operation of InGaAs quantum dot infrared photodetectors and infrared sensors applications**
Kim, S., Harris Jr., J., S.
2004
- **GaInNAsSb/GaNAs VCSELs at 1.46 μm**
Wistey, M., A., Bank, S., R., Yuen, H., B., Goddard, L., L., Harris Jr., J., S.
2004
- **MBE Growth and Characterization of Long Wavelength Dilute Nitride III-V Alloys** *Dilute Nitride Materials and Devices*
Harris Jr., J., S.
edited by Henini, M.
Elsevier, Amsterdam, The Netherlands.2004: 502–578
- **Long-Wavelength Dilute Nitride-Antimonide Lasers** *Dilute Nitride Materials and Devices*
Harris Jr., J., S.
edited by Henini, M.
Elsevier, Amsterdam, The Netherlands.2004: 1–92
- **Solid-source molecular-beam epitaxy growth of GaInNAsSb/InGaAs single quantum well on InP with photoluminescence peak wavelength at 2.04 μm** *J. Vac. Sci. Technol. B*
Fu, J., X., Bank, S., R., Wistey, M., A., Yuen, H., B., Harris, J., S.
2004; 3 (22): 1463-67
- **Single-phase growth studies of GaP on Si by solid-source MBE** *J. Vac. Sci. Technol. B*
Yu, X., Kuo, P., S., Ma, K., Levi, O., Fejer, M., M., Harris Jr., J., S.
2004; 3 (22): 1450-54
- **Multicolor InGaAs quantum-dot infrared photodetectors** *IEEE Photon. Technol. Lett.*
Kim, S., M., Harris, J., S.
2004; 11 (16): 2538-40
- **Structural characterization of molecular beam epitaxy grown GaInNAs and GaInNAsSb quantum wells by transmission electron microscopy** *Symposium on New Materials for Microphotonics held at the 2004 MRS Spring Meeting*
Gugov, T., Wistey, M., Yuen, H., Bank, S., Harris, J. S.

MATERIALS RESEARCH SOCIETY.2004: 267–272

- **Integrated bio-fluorescence sensor** *16th International Symposium on Microscale Separation and Analysis*
Thrush, E., Levi, O., Ha, W., Wang, K., Smith, S. J., Harris, J. S.
ELSEVIER SCIENCE BV.2003: 103–10
- **Nearest-neighbor configuration in (GaIn)(NAs) probed by X-ray absorption spectroscopy** *PHYSICAL REVIEW LETTERS*
Lordi, V., Gambin, V., Friedrich, S., Funk, T., Takizawa, T., Uno, K., Harris, J. S.
2003; 90 (14)
- **Heavy arsenic doping of silicon by molecular beam epitaxy** *12th International Conference on Molecular Beam Epitaxy (MBE-XII)*
Liu, X., Tang, Q., Kamins, T. I., Harris, J. S.
ELSEVIER SCIENCE BV.2003: 651–56
- **Nucleation of Ti-catalyzed self-assembled kinked Si nanowires grown by gas source MBE** *12th International Conference on Molecular Beam Epitaxy (MBE-XII)*
Tang, Q., Liu, X., Kamins, T. I., Solomon, G. S., Harris, J. S.
ELSEVIER SCIENCE BV.2003: 662–65
- **Improved dispersion relations for GaAs and applications to nonlinear optics** *J. Appl. Phys.*
Harris, J., S., Skauli, T., Kuo, P., S., L.Vodopyanov, K., Pinguet, T., J., Levi, O.
2003; 10 (94): 6447-55
- **Nearest-neighbor configuration in (GaIn)(NAs) probed by x-ray absorption spectroscopy** *Phys. Rev. Lett.*
Harris, J., S., Lordi, V., Gambin, V., Friedrich, S., Funk, T., Takizawa, T.
2003; 14 (90): 145505
- **High throughput integration of optoelectronics devices for biochip fluorescent detection** *SPIE-Photonics West, 4982, Microfluidics, BioMEMS, and Medical Microsystems*
Thrush, E., Levi, O., Wang, K., Wistey, M., A., Harris Jr., J., S., Smith, S., J.
2003; 4982: 162-169
- **1.3–1.55 μm GaInNAsSb lasers** *Acta Optica Sinica*
Harris, J., S.
2003; suppl., no.1 (23): 313-14
- **Standing-wave microspectrometer for multiple fluorescence detection**
Harris, J., S., Bhalotra, S., R., Kung, H., L., Fu, J., Helman, N., C., Levi, O.
2003
- **Novel, optically-controlled optical switch based on intimate integration of a surface-normal photodiode and waveguide electroabsorption modulator for wavelength conversion**
Demir, H., V., Sabnis, V., A., Fidaner, O., Latif, S., Harris Jr., J., S., Miller, D., A. B.
2003
- **Long wavelength GaInNAs(Sb) in-line fiber photodetector on GaAs**
Yang, H., Khalili, A., Wistey, M., Bank, S., Yuen, H., Harris, J.
2003
- **Integrated semiconductor fluorescence sensor for portable bio-medical diagnostics**
Harris, J., S., Thrush, E., Levi, O., Ha, W., Kurtz, A., Hwang, J.
2003
- **Low-threshold CW GaInNAsSb/GaAs laser at 1.49 μm** *Electron. Lett.*
Bank, S., Wistey, M., Yuen, H., Goddard, L., Ha, W., Harris Jr, J., S.
2003; 20 (39): 1445-6
- **High intensity 1.3 – 1.6 μm luminescence and structural changes on anneal from MBE grown (Ga, In)(N, As, Sb)** *J. Crystal Growth*
Harris, J., S., Gambin, V., Lordi, V., Ha, W., Wistey, M., Volz, K.
2003; 1-4 (251): 408-411

- **Low Temperature Growth of GaAs on Si Substrates for Ultra-fast Photoconductive Switches**
Ma, K., Urata, R., Miller, D., A. B., Harris Jr., James, S.
2003
- **S. R. Bank, M.A. Wistey, H. B. Yuen, L.L. Goddard, J. S. Harris, "Low threshold, CW, room temperature 1.49 μm GaAs-based lasers,**
Bank, S., R., Wistey, M., A., Yuen, H., B., Goddard, L.L., Harris Jr., J., S.
2003
- **A 100Gs/s Photoelectronic A/D converter**
Harris, J., S., Ioakeimidi, K., Leheny, R., Gradinaru, S., Ma, K., Aldana, R.
2003
- **1.5 μm GaInNAs(Sb) lasers grown on GaAs by MBE** *J. Crystal Growth*
Harris, J., S., Bank, S., Ha, W., Gambin, V., Wistey, M., Yuen, H.
2003; 1-4 (251): 367-371
- **Laser Background Rejection Optimization in Integrated Optoelectronic Fluorescence Sensor**
Harris, J., S., Thrush, E., Levi, O., Ha, W., Carey, G., Cook, L., J.
2003
- **Template design and fabrication for low-loss orientation-patterned nonlinear AlGaAs waveguides pumped at 1.55 μm** *J. Crystal Growth*
Yu, X., Scaccabarozzi, L., Levi, O., Pinguet, T., J., Fejer, M., M., Harris Jr., J., S.
2003; 251: 794-799
- **Optically-switched dual-diode electroabsorption modulators** *Integrated Photonics Research, OSA Technical Digest, Optical Society of America, Washington, DC*
Sabnis, V., A., Demir, H., V., Fidaner, O., Harris Jr., J., S., Miller, D., A. B., Zheng, J., F.
2003: 12-14
- **Optical Detection of Hot-Electron Spin Injection into GaAs from a Magnetic Tunnel Transistor Source** *Virtual J. Nanoscale Science & Techn.*
Harris, J., S., Jiang, X., Wang, R., van Dijken, S., Shelby, R., Macfarlane, R.
2003; 1 (8)
- **Optical Detection of Hot-Electron Spin Injection into GaAs from a Magnetic Tunnel Transistor Source** *Phys. Rev. Lett.*
Harris, J., S., Jiang, X., Wang, R., van Dijken, S., Shelby, R., Macfarlane, R.
2003; 90: 256603
- **Monolithic, GaInNAsSb VCSELs at 1.46 μm on GaAs by MBE** *Electron. Lett.*
Wistey, M., A., Bank, S., R., Yuen, H., B., Goddard, L., L., Harris, J., S.
2003; 25 (39): 1822-3
- **GaInNAsSb long wavelength lasers on GaAs**
Harris Jr., J., S.
2003
- **Standing-wave microsensor for adaptive analysis of spectral coherence**
Harris, J., S., Bhalotra, S., R., Kung, H., L., Fu, J., Helman, N., C., Levi, O.
2003
- **GaInNAsSb based long-wavelength lasers**
Harris Jr., J., S.
2003
- **Photonic A/D conversion using low-temperature-grown GaAs MSM switches integrated with Si-CMOS** *IEEE J. Lightwave Techn.*
Harris, J., S., Urata, R., Nathawad, Y., L., Takahashi, R., Ma, K., Miller, D., A. B.
2003; 12 (21): 3104-15
- **Twinning in TiSi₂-island catalyzed Si nanowires grown by gas-source molecular-beam epitaxy** *APPLIED PHYSICS LETTERS*
Tang, Q., Liu, X., Kamins, T. I., Solomon, G. S., Harris, J. S.
2002; 81 (13): 2451-2453

- **Chemically vapor deposited Si nanowires nucleated by self-assembled Ti islands on patterned and unpatterned Si substrates** *10th International Conference on Modulated Semiconductor Structures*
Kamins, T. I., Williams, R. S., Hesjedal, T., Harris, J. S.
ELSEVIER SCIENCE BV.2002: 995–98
- **Ga(A,N) layers in the dilute N limit studied by depth-resolved capacitance spectroscopy** *Appl. Phys. Lett.*
Krispin, P., Gambin, V., Harris, J., S., Ploog, K., H.
2002; 21 (81): 3987-3989
- **A 1.5 μm GaInNAs(Sb) laser grown on GaAs by MBE**
Harris, J., S., Ha, W., Gambin, V., Bank, S., Wistey, M., Yuen, H.
2002
- **Measurement of nonlinear coefficient of orientation-patterned GaAs and demonstration of highly efficient second harmonic generation** *Opt. Lett.*
Harris, J., S., Skauli, T., Vodopyanov, K., L., Pinguet, T., J., Schober, A., Levi, O.
2002; 27: 628-630
- **Difference-frequency generation of 8μm radiation in orientation-patterned GaAs crystal** *Opt. Lett.*
Levi, O., Pinguet, T., J., Skauli, T., Eyres, L., A., Parameswaran, K., R., Harris Jr., J., S.
2002; 23 (27): 2091—2093
- **Integrated semiconductor fluorescent detection system for biochip and biomedical applications**
Thrush, E., Levi, O., Wang, K., Wistey, M., Harris, J., S., Smith, S., J.
2002
- **Standing-wave Fourier transform spectrometer based on integrated MEMS mirror and thin-film photodetector** *IEEE J. Select. Topics Quantum Elect.*
Kung, H., L., Bhalotra, S., R., Mansell, J., D., Miller, D., A. B., Harris, J., S.
2002; 1 (8): 98-105
- **Electron traps in MBE Ga(A,N) layers grown by molecular beam epitaxy** *Appl. Phys. Lett.*
Krispin, P., Spruytte, S., G., Harris, J., S., Ploog, K., H.
2002; 12 (80): 2120-2122
- **Ultrafast optoelectronic sample-and-hold using low-temperature-grown GaAs MSM** *IEEE Photon. Techn. Lett.*
Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B., Harris, J., S.
2002; 5 (15): 724-6
- **Long-wavelength GaInNAs(Sb) lasers on GaAs** *IEEE J. Quant. Electron.*
Harris, J., S., Ha, W., Gambin, V., Bank, S., Wistey, M., Yuen, H.
2002; 38: 1260 –1267
- **GaInNAsSb for 1.3-1.6μm long wavelength lasers grown by molecular beam epitaxy** *IEEE J. Select Topics Quant. Electron*
Harris, J., S., Gambin, V., Ha, W., Wistey, M., Bank, S., Yuen, H.
2002; 4 (8): 795-800
- **Thermo-optic characterization of GaAs for quasi-phase-matched nonlinear-optical applications**
Harris, J., S., Skauli, T., Kuo, P., S., Levi, O., Vodopyanov, K., L., Pinguet, T.
2002
- **Integrated semiconductor fluorescent detection system for biochip and biomedical applications**
Thrush, E., Levi, O., Wang, K., Harris Jr., J., S., Smith, S., J.
2002
- **Examination of N incorporation into GaInNAs**
Lordi, V., Gambin, V., Ha, W., Bank, S., Harris, J.
2002
- **Optomechanical Model of Surface Micromachined Tunable Optoelectronic Devices** *IEEE J. Select. Topics Quantum Elect.*
Lin, C., C., Martin, W., A., Harris Jr., J., S.
2002; 1 (8): 80-87

- **Long Wavelength GaInNAsSb/GaNAsSb Multiple Quantum Well Lasers** *Electron. Lett.*
Harris, J., S., Ha, W., Gambin, V., Wistey, M., Bank, S., Yuen, H.
2002: 277-278
- **Ultrafast sampling using low temperature grown GaAs MSM switches integrated with CMOS amplifier for photonic A/D conversion**
Urata, R., Nathawad, L., Y., Ma, K., Takabashi, R., Miller, D., A. B., Wooley, B., A.
2002
- **Ti-Island-Catalyzed Si Nanowire Growth by Gas-Source MBE: Morphology and Twinning**
Tang, Q., Liu, X., Kamins, T., I., Solomon, G., S., Harris Jr., J., S.
2002
- **Differential optical remoting of ultrafast charge packets using self-linearized modulation**
Chin, H., Keeler, G., A., Helman, N., C., Wistey, M., Miller, D., A. B., Harris Jr., J., S.
2002
- **Continuously tunable Mid-IR Frequency Generation in Orientation Patterned GaAs**
Harris, J., S., Levi, O., Skauli, T., Pinguet, T., Vodopyanov, K., L., Kuo, P., S.
2002
- **Long Wavelength GaInNAs(Sb) Lasers on GaAs**
Ha, W., Harris, J., S.
2002
- **Highly efficient SHG in all-epitaxial quasi-phase-matched GaAs**
Harris, J., S., Vodopyanov, K., L., Skauli, T., Pinguet, T., J., Schober, A., Levi, O.
2002
- **High Efficiency Multiple Quantum Well GaInNAs/GaNAs Ridge-Waveguide Diode Lasers**
Ha, W., Gambin, V., Bank, S., Wistey, M., Kim, S., Harris Jr., J., S.
2002
- **Multiple-quantum-well GaInNAs-GaNAs ridge-waveguide laser diodes operating out to 1.4 μ m** *IEEE Photon. Technol. Lett.*
Ha, W., Gambin, V., Wistey, M., Bank, S., Kim, S., Harris Jr., J., S.
2002; 5 (14): 591-593
- **GaInNAs long wavelength lasers: Progress and Challenges** *Semicond. Sci. Techn.*
Harris Jr., J., S.
2002; 8 (17): 880-891
- **GaInNAs, a new material for long wavelength VCSELs** *10th Seoul International Symposium on the Physics of Semiconductors and Applications*
Harris, J. S.
KOREAN PHYSICAL SOC.2001: S306-S312
- **Decoherence in nearly isolated quantum dots** *PHYSICAL REVIEW LETTERS*
Folk, J. A., Marcus, C. M., Harris, J. S.
2001; 87 (20)
- **All-epitaxial fabrication of thick, orientation-patterned GaAs films for nonlinear optical frequency conversion** *APPLIED PHYSICS LETTERS*
Eyes, L. A., Tourreau, P. J., Pinguet, T. J., Ebert, C. B., Harris, J. S., Fejer, M. M., Becouarn, L., Gerard, B., Lallier, E.
2001; 79 (7): 904-906
- **Spin degeneracy and conductance fluctuations in open quantum dots** *PHYSICAL REVIEW LETTERS*
Folk, J. A., Patel, S. R., Birnbaum, K. M., Marcus, C. M., Duruo, C. I., Harris, J. S.
2001; 86 (10): 2102-2105
- **Ti-catalyzed Si nanowires by chemical vapor deposition: Microscopy and growth mechanisms** *JOURNAL OF APPLIED PHYSICS*
Kamins, T. I., Williams, R. S., Basile, D. P., Hesjedal, T., Harris, J. S.
2001; 89 (2): 1008-1016

- **Use of angle resolved X-Ray Photoelectron Spectroscopy for determination of depth and thickness of the different layers in a layer structure** *J. Vac. Sci. Technol.*
Spruytte, S., Coldren, C., Harris, J., Pantelidis, D., Lee, H., J., Bravman, J.
2001; 2 (19): 603-608
- **High-speed, dual-function vertical cavity multiple quantum well modulators and photodetectors for optical interconnects** *Optical Engr.*
Liu, H., Lin, C., C., Harris, J., S.
2001; 7 (40): 1186-1191
- **GaInNAs long wavelength vertical cavity lasers** *Technical Digest. CLEO/Pacific Rim*
Larson, M., C., Coldren, C., C., Spruytte, S., G., Petersen, H., E., Garrett, H., E, Harris, J., S.
2001: 594-5
- **Opto-mechanical model of surface micromachined tunable optoelectronic devices**
Lin, C., C., Martin, W., A., Harris Jr., J., S.
2001
- **Mid-infrared generation by difference frequency mixing in orientation-patterned GaAs**
Harris, J., S., Levi, O., Pinguet, T., Skauli, T., Eyres, L., A., Scaccabarozzi, L.
2001
- **Nitrogen incorporation in Group III-Nitride Arsenide materials grown by elemental source MBE** *J. Crystal Growth*
Harris, J., S., Spruytte, S., G., Larson, M., C., Wampler, W., Coldren, C., W., Petersen, E., H
2001; 227: 506-515
- **Incorporation of Nitrogen in Nitride-Arsenides: Origin of improved Luminescence Efficiency after Anneal** *J. Appl. Phys.*
Harris, J., S., Spruytte, S., Wampler, W., Krispin, P., Coldren, C., Larson, M.
2001; 8 (89): 4401-4406
- **Deep-level defects in MBE grown Ga(A,N) layers** *Physica B*
Krispin, P., Spruytte, S., G., Harris, J., S., Ploog, K., H.
2001; 308: 870-873
- **Admittance dispersion of n-type GaAs/Ga(As, N)/GaAs heterostructures grown by molecular beam epitaxy** *J. Appl. Phys.*
Krispin, P., Spruytte, S., G., Harris, J., S., Ploog, K., H.
2001; 5 (90): 2405-2410
- **High-speed sample and hold using low-temperature-grown GaAs MSM switches for photonic A/D conversion**
Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B., Harris Jr., J., S.
2001
- **Ultrafast differential sample and hold using low-temperature-grown GaAs MSM for photonic A/D conversion** *IEEE Photon. Technol. Lett.*
Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B., Harris, J., S.
2001; 7 (13): 717-719
- **Widely Tunable Micromachined Optical Filter with Adjustable Tuning Characteristics**
Lin, C., C., Fu, J., Harris Jr., J., S.
2001
- **Tunable mid-IR generation by difference-frequency mixing in orientation-patterned GaAs**
Harris, J., S., Levi, O., Skauli, T., Pinguet, T., J., Eyres, L., A., Scaccabarozzi, L.
2001
- **GaInNAs material properties for long wavelength opto-electronic devices**
Gambin, V., Ha, W., Wistey, M., Kim, S., Harris Jr., J., S.
2001
- **Characterization of 0.5 mm Thick films of orientation-patterned GaAs for nonlinear optical applications**
Harris, J., S., Pinguet, T., Skauli, T., Levi, O., Vodopyanov, K., Eyres, L., A.
2001

- **Theoretical predictions of unstable two-phase regions in wurtzite group-III-nitride-based ternary and quaternary material systems using modified valence force field model** *J. Appl. Phys.*
Takayama, T., Yuri, M., Itoh, K., Baba, T., Harris Jr., J., S.
2001; 5 (90): 2358-2369
- **Origin and annealing of deep-level defects in p-type GaAs/Ga(As,N)/GaAs heterostructures grown by molecular beam epitaxy** *J. Appl. Phys.*
Krispin, P., Spruytte, S., G., Harris, J., S., Ploog, K., H.
2001; 11 (89): 6294-6301
- **Second harmonic generation in thick orientation-patterned GaAs**
Harris, J., S., Skauli, T., Vodopyanov, K., Pinguet, T., W., Levi, O., Eyres, L., A.
2001
- **Long wavelength GaInNAs ridge waveguide lasers with GaNAs barriers**
Ha, W., Gambin, V., Wistey, M., Bank, S., Kim, S., Harris Jr., J., S.
2001
- **1.3 micron opto-electronic devices on GaAs using group III-Nitride-Arsenides**
Spruytte, S., G., Wistey, M., A., Larson, M., C., Coldren, C., W., Garrett, H., Harris, J., S.
2001
- **Decoherence in nearly isolated quantum dots** *Phys. Rev. Lett.*
Folk, J., A., Marcus, C., M., Harris, J., S.
2001; 20 (87): 6802-6804
- **Analysis of phase-separation region in wurtzite group III nitride quaternary material system using modified valence force field model** *J. Crystal Growth*
Takayama, T., Yuri, M., Itoh, K., Baba, T., Harris, J., S.
2001; 1-2 (222): 29-37
- **Second harmonic generation in orientation-patterned AlGaAs waveguides pumped at 1.55 microns**
Harris, J., S., Pinguet, T., Scaccabarozzi, L., Levi, O., Skauli, T., Eyres, L., A.
2001
- **Observation of Wavelength-Converting Optical Switching at 2.5 GHz in a Surface Normal Illuminated Waveguide**
Sabnis, V., A., Demir, H., V., Yairi, M., Miller, D., A.B., Harris Jr., J., S.
2001
- **High efficiency Multiple Quantum Well GaInNAs/GaNAs Ridge-Waveguide Laser diode operating out to 1.4µm**
Ha, W., Gambin, V., Wistey, M., Kim, S., Harris Jr., J.
2001
- **Use of a dielectric stack as a one-dimensional photonic crystal for wavelength demultiplexing by beam shifting** *OPTICS LETTERS*
Nelson, B. E., Gerken, M., Miller, D. A., Piestun, R., Lin, C. C., Harris, J. S.
2000; 25 (20): 1502-1504
- **Narrow-band light emission in semiconductor-fibre asymmetric waveguide coupler** *ELECTRONICS LETTERS*
Mao, E., Yankelevich, D. R., Lin, C. C., Solgaard, O., Knoesen, A., Harris, J. S.
2000; 36 (16): 1378-1379
- **Basic properties of GaAs oxide generated by scanning probe microscope tip-induced nano-oxidation process** *JOURNAL OF APPLIED PHYSICS*
Okada, Y., Iuchi, Y., Kawabe, M., Harris, J. S.
2000; 88 (2): 1136-1140
- **Wavelength-selective semiconductor in-line fibre photodetectors** *ELECTRONICS LETTERS*
Mao, E., Yankelevich, D. R., Lin, C. C., Solgaard, O., Knoesen, A., Harris, J. S.
2000; 36 (6): 515-516
- **Electrical depth profile of p-type GaAs/Ga(As, N)/GaAs heterostructures determined by capacitance-voltage measurements** *J. Appl. Phys.*
Krispin, P., Spruytte, S., G., Harris, J., S., Ploog, K., H.
2000; 7 (88): 4153-4158

- **All-epitaxial orientation-patterned GaAs for nonlinear optical frequency conversion**
Eyres, L., A., Tourreau, P., J., Pinguet, T., J., Ebert, C., B., Harris, J., S., Fejer, M., M.
2000
- **Wavelength monitor based on two single-quantum-well absorbers sampling a standing wave pattern** *Appl. Phys. Lett.*
Kung, H., L., Miller, D., A. B., Atanackovic, P., Lin, C., C., Harris Jr., J., S., Carraresi, L.
2000; 22 (76): 3185-3187
- **Thick (200 nm) orientation-patterned GaAs for bulk quasi-phase-matched nonlinear frequency conversion** *Tech. Digest CLEO, TOPS, San Francisco, CA*
Eyres, L., A., Tourreau, P., J., Pinguet, T., J., Ebert, C., B., Harris, J., S., Fejer, M., M.
2000; 39
- **In-line fiber evanescent field electrooptic modulators** *J. Nonlinear Optical Phys. Materials*
Arft, G., Yankelevich, D., R., Knoesen, A., Mao, E., Harris Jr., J., S.
2000; 1 (9): 79-94
- **Experimental and simulated results of room temperature single electron transistor formed by atomic force microscopy nano-oxidation process** *Jpn. J. Appl. Phys.*
Gotoh, Y., Matsumoto, K., Bubanja, B., Vazquez, F., Maeda, T., Harris, J., S.
2000; 4B (39): 2334-2337
- **Analysis of unstable two-phase region in wurtzite Group III nitride ternary alloy using modified valence force field model** *Jpn. J. Appl. Phys.*
Takayama, T., Yuri, M., Itoh, K., Baba, T., Harris, J., S.
2000; 9A (39): 5057-5062
- **1200nm GaAs-based vertical cavity lasers employing GaInNAs multi-quantum well active regions** *Electron. Lett.*
Coldren, C., W., Larson, M., C., Spruytte, S., G., Harris Jr., J., S.
2000; 11 (36): 951-952
- **MBE growth of nitride-arsenide materials for long wavelength opto-electronics** *Symposium on GaN and Related Alloys Held at the MRS Fall Meeting*
Spruytte, S. G., Coldren, C. W., Marshall, A. F., Larson, M. C., Harris, J. S.
MATERIALS RESEARCH SOC.2000: U407-U412
- **Quasi-phases-matched frequency conversion in thick all-epitaxial, orientation-patterned GaAs films**
Eyres, L., A., Tourreau, P., J., Pinguet, T., J., Ebert, C., B., Harris, J., S., Fejer, M., M.
2000
- **Modeling of MEMS tunable optoelectronic device mirror**
Lin, C., C., Martin, W., A., Harris Jr., J., S., Chan, E.
2000
- **Wavelength demultiplexing by beam shifting using a dielectric stack as a one-dimensional photonic crystal**
Nelson, B., E., Gerken, M., Miller, D., A. B., Piestun, R., Lin, C., C., Harris Jr., J., S.
2000
- **Molecular beam epitaxial growth of group III-nitride-arsenides for long wavelength optoelectronics**
Spruytte, S., G., Larson, M., C., Wampler, W., Coldren, C., W., Harris Jr., J., S.
2000
- **Compositional Evolution and Structural Changes during Anneal of Group III-Nitride-arsenide Alloys**
Spruytte, S., G., Coldren, C., W., Marshall, A., F., Harris, J., S.
2000
- **Theoretical analysis of unstable two-phase region and microscopic structure in wurtzite and zinc-blende InGaN using modified valence force field model** *J. Appl. Phys.*
Takayama, T., Yuri, M., Itoh, K., Baba, T., Harris Jr., J., S.
2000; 2 (88): 1104-1110
- **Low-threshold oxide-confined GaInNAs long wavelength vertical cavity lasers** *IEEE Photon. Technol. Lett.*
Larson, M., C., Coldren, C., W., Spruytte, S., G., Petersen, H., E., Harris, J., S.

2000; 12 (12): 1598-1600

● **Vertical Cavity Modulator for Optical Interconnection and its High Speed Performance**

Liu, H., Lin, C., C., Harris Jr., J., S.

2000

● **A multiple-quantum-well GaAs/AlGaAs in-line fiber intensity modulator**

Mao, E., Yankelevich, D., R., Coldren, C., W., Solgaard, O., Knoesen, A., Harris Jr., J., S.

2000

● **Tunable long wavelength vertical cavity lasers: the engine of next generation optical networks** *IEEE/LEOS Special Millenium Issue, IEEE J. Sel. Top. Quan. Elect.*

Harris Jr., J., S.

2000; 6: 1145-1160

● **Room-temperature single-electron memory made by pulse-mode atomic force microscopy nano oxidation process on atomically flat alpha-alumina substrate** *Appl. Phys. Lett.*

Matsumoto, K., Gotoh, Y., Maeda, T., Dagata, J., A., Harris Jr., J., S.

2000; 2 (76): 239-241

● **Low threshold current continuous-wave GaInNAs/GaAs VCSELs**

Larson, M., C., Coldren, C., W., Spruytte, S., G., Petersen, H., E., Harris, J., S.

2000

● **Narrow-band light emission in a semiconductor-fiber asymmetric waveguide coupler**

Mao, E., Lin, C., C., Solgaard, O., Harris, J., S.

2000

● **Incorporation of nitrogen in group III-nitrides-arsenides grown by molecular beam epitaxy (MBE)**

Spruytte, S., G., Coldren, C., W., Larson, M., C., Harris, J., S.

2000

● **Demonstration of an optoelectronic dual-diode optically controlled optical gate with a 20 picosecond repetition period**

Yairi, M., B., Demir, H., V., Coldren, C., W., Harris, J., S., Miller, D., A. B.

2000

● **Pulsed 25-108 degrees C operation of GaInNAs multiple quantum well vertical cavity lasers** *Tech. Digest CLEO, TOPS, San Francisco, CA*

Coldren, C., W., Larson, M., C., Spruytte, S., G., Garrett, H., E., Harris Jr., J., S.

2000; 39: 229-230

● **Optical gain and collector current characteristics of resonant-cavity phototransistors** *Appl. Phys. Lett.*

Lin, C., C., Martin, W., Harris, J., S., Sugihwo, F.

2000; 9 (76): 1188-1190

● **Group III nitride-arsenide long wavelength lasers grown by elemental source molecular beam epitaxy** *J. Vac. Sci. Technol. B*

Coldren, C., W., Spruytte, S., G., Harris Jr., J., S., Larson, M., C.

2000; 3 (18): 1480-1483

● **Frequency locking of micromachined tunable VCSELs to external wavelength selective filters** *Digest LEOS Summer Topical Meeting Optical Sensing in Semiconductor Manufacturing, Aventura, FL*

Martin, W., A., Lin, C., C., Sugihwo, F., Harris Jr., J., S.

2000

● **Low-temperature saturation of the dephasing time and effects of microwave radiation on open quantum dots** *PHYSICAL REVIEW LETTERS*

Huibers, A. G., Folk, J. A., Patel, S. R., Marcus, C. M., Duruo, C. I., Harris, J. S.

1999; 83 (24): 5090-5093

● **Strain directed assembly of nanoparticle arrays within a semiconductor** *JOURNAL OF NANOPARTICLE RESEARCH*

Hung, C., Marshall, A. F., Kim, D., Nix, W. D., Harris, J. S., Kiehl, R. A.

1999; 1 (3): 329-347

- **Size stabilization of arsenic precipitates in nonstoichiometric GaAs-based compounds** *APPLIED PHYSICS LETTERS*
Hung, C. Y., Harris, J. S., Marshall, A. F., Kiehl, R. A.
1999; 75 (7): 917-919
- **Coulomb blockade fluctuations in strongly coupled quantum dots** *PHYSICAL REVIEW LETTERS*
Maurer, S. M., Patel, S. R., Marcus, C. M., Duruoaz, C. I., Harris, J. S.
1999; 83 (7): 1403-1406
- **High-speed, optically controlled surface-normal optical switch based on diffusive conduction** *APPLIED PHYSICS LETTERS*
Yairi, M. B., Coldren, C. W., Miller, D. A., Harris, J. S.
1999; 75 (5): 597-599
- **GaAs AlGaAs multiple-quantum-well in-line fiber intensity modulator** *APPLIED PHYSICS LETTERS*
Mao, E., Coldren, C. W., Harris, J. S., Yankelevich, D. R., Solgaard, O., Knoesen, A.
1999; 75 (3): 310-312
- **Optical and structural properties of epitaxial GaN films grown by pulsed laser deposition** *JOURNAL OF CRYSTAL GROWTH*
HUANG, T. F., Marshall, A., Spruytte, S., Harris, J. S.
1999; 200 (3-4): 362-367
- **An AlGaAs/GaAs tunnel diode integrated with nanometer-scale atomic force microscope tip-induced oxides** *JAPANESE JOURNAL OF APPLIED PHYSICS PART 2-LETTERS & EXPRESS LETTERS*
Okada, Y., Iuchi, Y., Kawabe, M., Harris, J. S.
1999; 38 (2B): L160-L162
- **Group III-nitride-arsenide long wavelength lasers grown by elemental source molecular beam epitaxy**
Coldren, C. W., Spruytte, S., G., Harris, J. S., Larson, M., C.
1999
- **Realization of logically labeled effective pure states for bulk quantum computation** *Phys. Rev. Lett.*
Harris, J. S., Vandersypen, L., M. K., Yannoni, C., S., Sherwood, M., H., Chuang, I., L.
1999; 83: 3085
- **Excess noise in sub-micron silicon FET: characterization, prediction and control**
Franca-Neto, L., M., Harris, J., S.
1999
- **Scanned potential microscopy of edge and bulk currents in the quantum Hall regime** *Phys. Rev B*
Harris, J., S., McCormick, K., L., Woodside, M., T., Huang, M., Wu, M., S., McEuen, P., L.
1999; 7 (59): 4654-4657
- **Vertical cavity modulator for optical interconnection and its high speed performance**
Liu, H., Lin, C., C., Harris Jr., J., S.
1999
- **Micromachined tunable optoelectronic devices for spectroscopic applications**
Harris Jr., J., S., Lin, C., C., Martin, W., Sugihwo, F., Larson, M., Paldus, B.
1999
- **GaAs/AlGaAs narrow-bandwidth in-line fiber filter**
Mao, E., Coldren, C. W., Harris Jr., J., S., Yankelevich, D., R., Solgaard, O., Knoesen, A.
1999
- **Demonstration of second harmonic generation in all-epitaxially grown orientation-patterned AlGaAs waveguides**
Eyres, L., A., Ebert, C., B., Tourreau, P., J., Harris, J., S., Fejer, M., M.
1999
- **GaAs/AlGaAs Oxide Tunnel Barriers Fabricated by Atomic Force Microscope Tip-Induced Nano-Oxidation Technique** *Internl. Symp. Compound Semiconductors*
Okada, Y., Iuchi, Kawabe, M., Harris Jr., J., S.

Institute of Physics Publishing, 1999: 337–340

- **GaAs/AlGaAs Oxide Tunnel Barriers Fabricated by Atomic Force Microscope Tip-Induced Nano-Oxidation Technique**
Okada, Y., Iuchi, Y., Kawabe, M., Harris Jr., J., S.
1999
- **Nearest-neighbor spatial ordering of strain-induced islands using a subsurface island superlattice** *J. Cryst. Growth*
Solomon, G., S., Komarov, S., Harris Jr., J., S.
1999; 202: 1190-1193
- **Metal-based room-temperature operating single electron devices using scanning probe oxidation** *J. J. Appl. Phys.*
Matsumoto, K., Gotoh, Y., Maeda, T., Dagata, J., A., Harris Jr., J., S.
1999; 1B (38): 477-479
- **MBE growth of antiphase GaAs films using GaAs/Ge/GaAs heteroepitaxy** *J. Crystal Growth*
Ebert, C., B., Eyres, L., A., Fejer, M., M., Harris Jr., J., S.
1999; 202: 187-193
- **Room temperature single electron transistor by AFM nano-oxidation process-coincidence in experimental and theoretical results**
Matsumoto, K., Gotoh, Y., Maeda, T., Harris, J., S.
1999
- **Optically-controlled optical gate using a double diode structure**
Yairi, M., B., Demir, H., V., Coldren, C., W., Miller, D., A. B., Harris Jr., J., S.
1999
- **MBE Growth of Nitride-Arsenide Materials for long Wavelength Opto-electronics**
Spruytte, S., G., Coldren, C., W., Marshall, A., F., Larson, M., C., Harris, J., S.
1999
- **Mesoscopic Coulomb blockade in one-channel quantum dots** *PHYSICAL REVIEW LETTERS*
Cronenwett, S. M., Maurer, S. M., Patel, S. R., Marcus, C. M., Duruoz, C. I., Harris, J. S.
1998; 81 (26): 5904-5907
- **Changing the electronic spectrum of a quantum dot by adding electrons** *PHYSICAL REVIEW LETTERS*
Patel, S. R., Stewart, D. R., Marcus, C. M., Gokcedag, M., Alhassid, Y., Stone, A. D., Duruoz, C. I., Harris, J. S.
1998; 81 (26): 5900-5903
- **Distributions of the conductance and its parametric derivatives in quantum dots** *PHYSICAL REVIEW LETTERS*
Huibers, A. G., Patel, S. R., Marcus, C. M., Brouwer, P. W., Duruoz, C. I., Harris, J. S.
1998; 81 (9): 1917-1920
- **Annealing cycle dependence of preferential arsenic precipitation in AlGaAs/GaAs layers** *APPLIED PHYSICS LETTERS*
Hung, C. Y., Harris, J. S., Marshall, A. F., Kiehl, R. A.
1998; 73 (3): 330-332
- **Statistics of Coulomb blockade peak spacings** *PHYSICAL REVIEW LETTERS*
Patel, S. R., Cronenwett, S. M., Stewart, D. R., Huibers, A. G., Marcus, C. M., Duruoz, C. I., Harris, J. S., Campman, K., Gossard, A. C.
1998; 80 (20): 4522-4525
- **Cavity-locked ring-down spectroscopy** *JOURNAL OF APPLIED PHYSICS*
Paldus, B. A., Harb, C. C., Spence, T. G., Wilke, B., Xie, J., Harris, J. S., Zare, R. N.
1998; 83 (8): 3991-3997
- **Nanoscale oxidation of GaAs-based semiconductors using atomic force microscope** *JOURNAL OF APPLIED PHYSICS*
Okada, Y., Amano, S., Kawabe, M., Shimbo, B. N., Harris, J. S.
1998; 83 (4): 1844-1847
- **Atomic force microscope nanoscale lithography for single-electron device applications** *24th IEEE International Symposium on Compound Semiconductors*
Okada, Y., Amano, S., Kawabe, M., Shimbo, B. N., Harris, J. S.

IOP PUBLISHING LTD.1998: 577-580

- **Near-Infrared Cavity Ringdown Spectroscopy of Water Vapor in an Atmospheric Flame** *Chem. Phys. Lett.*
Harris, J., S., Xie, J., Paldus, B., A., Wahl, E., H., Owano, T., G., Kruger, C., H.
1998; 5-6 (284): 387-395
- **AlGaAs/GaAs Tunneling Diode Integrated with nanometre-scale Oxides Patterned by Atomic Force Microscope** *Electron. Lett.*
Okada, Y., Amano, S., Iuchi, Y., Kawabe, M., Harris Jr., J., S.
1998; 34: 12, 1262-1263
- **Advances in CW cavity ring-down spectroscopy** *Technical Digest International Quantum Electronics Conference*
Paldus, A., Spence, T., G., Harb, C., C., Willke, B., Levenson, M., D., Harris Jr., J., S.
1998: 79
- **MBE growth of laterally antiphase-patterned GaAs films using thin Ge layers for waveguide mixing**
Eyes, A., Ebert, C., B., Fejer, M., M., Harris Jr., J., S.
1998
- **In-line fiber-optic filter using GaAs ARROW waveguide**
Mao, E., Coldren, C., Harris Jr., J., S., Yankelevich, D., Solgaard, O., Knoesen, A.
1998
- **Vapor Phase Epitaxy Growth of GaN on Pulsed Laser Deposited ZnO Buffer Layer** *J. Cryst. Growth*
Harris, J., S., Ueda, T., Huang, T., F., Spruytte, S., Lee, H., Yuri, M.
1998; 3-4 (187): 340-346
- **Scanned potential microscopy of a two-dimensional electron gas** *Physica B*
McCormick, K., L., Woodside, M., T., Huang, M., McEuen, P., L., Duruöz, C., I., Harris Jr., J., S.
1998; 251: 79-83
- **Room Temperature Coulomb Oscillation and Memory Effect for Single Electron Memory made by Pulse-Mode AFM Nano-oxidation Process** *IEDM, San Francisco.*
Matsumoto, K., Gotoh, Y., Maeda, T., Dagata, J., A., Harris, J., S.
1998
- **Micromachined Tunable Vertical-Cavity Lasers as Wavelength-Selective Tunable Photodetectors**
Sugihwo, F., Lin, C., C., Bouteiller, J., C., Larson, M., Harris Jr., J., S.
1998
- **Calculation of Unstable Mixing Region in Wurtzite InGaN**
Harris, J., S., Takayama, T., Ueda, T., Ishida, M., Yuri, M., Itoh, K.
1998
- **Simultaneous Optimization of Membrane Reflectance and Tuning Voltage for Tunable Vertical Cavity Lasers** *Appl. Phys. Lett.*
Sugihwo, F., Larson, M., Harris Jr., J., S.
1998; 1 (72): 10-12
- **Optical Heterodyne Detection in Cavity Ring-Down Spectroscopy** *Chem Phys. Lett.*
Levenson, M., D., Paldus, B., A., Spence, T., G., Harb, C., C., Harris Jr., J., S., Zare, R., N.
1998; 290 (4-6): 335-340
- **Growth of epitaxial Al_xGa_{1-x}N films by pulsed laser deposition** *App. Phys. Lett.*
Huang, T., F., Harris Jr., J., S.
1998; 10 (72): 1158-1160
- **Increased surface ordering of InAs island arrays using a multidot column subsurface structure**
Komarov, S., A., Solomon, G., S., Harris Jr., J., S.
1998
- **High-speed quantum well optoelectronic gate based on diffusive conduction recovery**
Harris, J., S., Yairi, B., Coldren, C., W., Miller, D., A. B.

1998

- **Vertical InAs diffusion and surface ordering processes in InAs vertical quantum dot columns** *Physica E*
Solomon, G., S., Wu, W., Tucker, J., R., Harris Jr., J., S.
1998; 1-4 (2): 709-713
- **Two-dimensional Device Simulation for PHEMT Material and Process Control**
Pao, Y., C., Harris Jr., J., S.
1998
- **Iron Nitride Mask and Reactive Ion Etching of GaN Films** *J. Elec. Matls*
Lee, H., Harris Jr., J., S.
1998; #4 (27): 185-189
- **Basic Mechanisms of an Atomic Force Microscope Tip-induced Nano-oxidation Process of GaAs** *J. Appl. Phys.*
Okada, Y., Amano, S., Kawabe, M., Harris Jr., J., S.
1998; 83: 12, 7998-8001
- **Micromachined tunable vertical cavity lasers as wavelength selective tunable photodetectors**
Sugihwo, F., Lin, C., C., Bouteiller, J., C., Larson, M., Harris Jr., J., S.
1998
- **Low Noise Silicon RF FET Design Using Graded Doping and Stress**
Franca-Neto, L., M., Harris Jr., J., S.
1998
- **Statistics of peak spacings and widths in the quantum coulomb blockade regime** *Physica B*
Marcus, C., M., Patel, S., R., Duruöz, C., I., Harris Jr., J., S., Campman, K., Gossard, A., C.
1998; 251: 201-205
- **Micromachined Widely Tunable Vertical Cavity Laser Diodes** *J. of Microelectromechanical Systems*
Sugihwo, F., Larson, M., Harris Jr., J., S.
1998; 1 (7): 48-55
- **Bulk Spin Quantum Computation toward Large-scale Quantum Computation** *Dig. Tech. Papers, IEEE ISSCC*
Chuang, I., L., Vandersypen, L., M. K., Harris, J., S.
1998: 96-97
- **Broadly-tunable narrow-linewidth micromachined laser/photodetector and phototransistor** *Technical Digest, IEEE IEDM, San Francisco, CA*
Sugihwo, F., Lin, C., C., Eyres, L., A., Fejer, M., M., Harris Jr., J., S.
1998: 665
- **Laser diode cavity ring-down spectroscopy using acousto-optic modulator stabilization** *JOURNAL OF APPLIED PHYSICS*
Paldus, B. A., Harris, J. S., Martin, J., Xie, J., Zare, R. N.
1997; 82 (7): 3199-3204
- **Localised impurity induced layer disordering for lithographic control of the lateral oxidation of AlAs** *ELECTRONICS LETTERS*
Massengale, A. R., Ueda, T., Harris, J. S., Tai, C. Y., Deal, M. D., Plummer, J. D., Fernandez, R.
1997; 33 (12): 1087-1089
- **Growth of abrupt GaAs/Ge heterointerfaces by atomic hydrogen-assisted molecular beam epitaxy** *9th International Conference on Molecular Beam Epitaxy (MBE-IX)*
Okada, Y., Harris, J. S., SUTOH, A., Kawabe, M.
ELSEVIER SCIENCE BV.1997: 1039-1044
- **Near-infrared wavelength intersubband transitions in high indium content InGaAs/AlAs quantum wells grown on GaAs** *ELECTRONICS LETTERS*
Sung, B., Chui, H. C., Fejer, M. M., Harris, J. S.
1997; 33 (9): 818-820
- **Zero chirp asymmetric fabry-perot electroabsorption modulator using coupled quantum wells** *IEEE PHOTONICS TECHNOLOGY LETTERS*
Trezza, J. A., Powell, J. S., Harris, J. S.

1997; 9 (3): 330-332

- **Correlations between ground and excited state spectra of a quantum Dot** *Science (New York, N.Y.)*
Stewart, D. R., Sprinzak, D., Marcus, C. M., Duruo, C. I., Harris, J. S.
1997; 278 (5344): 1784-88
- **Whispering Gallery Mode Operation in Tunable Vertical Cavity Laser Structure** *Electron. Lett.*
Sugihwo, F., Larson, M., Harris Jr., J., S.
1997; 4 (33): 1467-8
- **Increased size uniformity through vertical quantum dot columns** *J. Crystal Growth*
Solomon, G., S., Komarov, S., Harris Jr., J., S., Yamamoto, Y.
1997; pt.2 (175): 707-712
- **Fabrication of Single Electron Memory on Atomically Flat a-Al₂O₃ Substrate made by AFM Nano-Oxidation Process** *International Electron Devices Meeting, Washington, DC*
Matsumoto, K., Gotoh, Y., Shirakashi, J. I., Maeda, T., Harris Jr., J., S.
1997: 155-157
- **Atom-resolved Scanning Tunneling Microscopy of Vertically Ordered InAs Quantum Dots** *Appl. Phys. Lett.*
Wu, W., Solomon, G., S., Harris Jr., J., S., Tucker, J., R.
1997; 71: 1083-1085
- **Low Noise FET Design for Wireless Communications**
Franca-Neto, M., Mao, E., Harris Jr., J., S.
1997
- **Experiments on the Statistics of Coulomb Blockade Peak Spacing: Beyond Random Matrix Theory**
Marcus, C., M., Patel, S., R., Cronenwett, S., M., Stewart, D., R., Huibers, A., G., Harris Jr., J., S.
1997
- **Arsenic Precipitation in GaAs for Single-Electron Tunneling Applications**
Hung, C., Y., Harris Jr., J., S.
1997
- **Laser parameter extraction for tunable vertical cavity lasers** *Elect. Lett.*
Lin, C., C., Sugihwo, F., Harris Jr., J., S.
1997; 20 (33): 1705-1707
- **Intersubband Absorption Saturation Study of Narrow III-V Multiple Quantum Wells in the $\lambda = 2.8-9 \mu\text{m}$ Spectral Range** *Semicond. Sci. Technol.*
Vodopyanov, K., L., Chazapis, V., Phillips, C., C., Sung, B., Harris Jr., J., S.
1997; 12: 708-714
- **Growth of Thick GaN Films on RF Sputtered AlN Buffer Layer by Hydride Vapor Phase Epitaxy** *J. Electronic Materials*
Lee, H., Yuri, M., Ueda, T., Harris Jr., J., S., Sin, K.
1997; 8 (26): 898-902
- **Increased Ordering in Vertically Coupled InAs Quantum Dot Arrays**
Solomon, G., S., Harris Jr., J., S.
1997
- **Electromechanical Tuning of Lasing Wavelength of Vertical Cavity Lasers**
Sugihwo, F., Lin, C., C., Larson, M., Harris Jr., J., S.
1997
- **Cavity ring-down spectroscopy with Fourier-transform-limited light pulses** *Chem. Phys. Lett.*
Martin, J., Paldus, B., A., Zalicki, P., Wahl, E., H., Owano, T., G., Harris, J., S.
1997; 1-2 (258): 63-70
- **Localized Intermixing of AlAs and GaAs Layers for Lithographic Control of the Lateral Oxidation of AlAs**
Massengale, A., R., Tai, C., Y., Deal, M., D., Plummer, J., D., Harris Jr., J., S.

1997

- **Optical Heterodyne Detection in Cavity Ring-Down Spectroscopy** *Chem. Phys Lett.*
Levenson, M., D., Paldus, B., A., Spence, T., G., Harb, C., C., Harris Jr., J., S., Zare, R., N.
1997
- **Single Electron Transistor on Atomically Flat a-Al₂O₃ Substrate made by AFM Nano-Oxidation Process**
Matsumoto, K., Gotoh, Y., Shirakashi, J. I., Maeda, T., Harris Jr., J., S.
1997
- **Growth and Defects of Single Crystalline ZnO Buffer Layer on GaN**
Huang, T., F., Ueda, T., Spruytte, S., Harris Jr., J., S.
1997
- **30nm Wavelength Tunable Vertical Cavity Lasers**
Sugihwo, F., Larson, M., C., Harris Jr., J., S.
1997
- **Scanned Potential Microscopy of a Two-dimensional electron gas**
Harris, J., S., McCormick, L., Woodside, M., Huang, M., McEuen, P., L., Duruöz, C., I.
1997
- **Increased Surface Ordering of InAs Island Arrays Using a Multi-Dot Column Subsurface Structure**
Komarov, S., A., Solomon, G., S., Harris Jr., J., S.
1997
- **Correlations between Ground and Excited State Spectra of a Quantum Dot**
Stewart, R., Sprinzak, D., Marcus, C., M., Duruöz, C., I
1997
- **Low Threshold Continuously Tunable Vertical Cavity Surface Emitting Lasers with 19.1 nm Wavelength Range** *Appl. Phys. Lett.*
Sugihwo, F., Larson, M., Harris Jr., J., S.
1997; 70: 547-549
- **Analysis of Device Parameters for Pnp-Type AlGaAs/GaAs HBTs Including High-Injection Using New Direct Parameter Extraction** *IEEE Trans. Electron Devices*
Kameyama, A., R., Massengale, C., H., Dai, C., H., Harris Jr., J., S.
1997; 1 (44): 1-10
- **Structural and photoluminescence properties of growth-induced InAs island columns in GaAs** *15th North American Conference on Molecular Beam Epitaxy*
Solomon, G. S., Trezza, J. A., Marshall, A. F., Harris, J. S.
A V S AMER INST PHYSICS.1996: 2208-11
- **Broad-Range Continuous Wavelength Tuning in Microelectromechanical Vertical-Cavity Surface-Emitting Lasers** *Digest IEEE/LEOS 1996 Summer Topical Meetings*
Harris Jr., J., S., Larson, M., C., Massengale, A., R.
1996
- **Intrinsic Bistability in Nonlinear Transport Through a Submicron Lateral Barrier** *Surface Science*
Pilling, G., Cobden, D., H., McEuen, P., L., Duruöz, C., I., Harris Jr., J., S.
1996; 1-3 (362): 652-655
- **Electroluminescence in vertically aligned quantum dot multilayer light-emitting diodes fabricating by growth-induced islanding** *Appl. Phys. Lett.*
Solomon, G., S., Larson, M., C., Harris Jr., J., S.
1996; 13 (69): 1897-1899
- **Vertical-cavity X-modulators for WDM**
Powell, J., S., Trezza, J., A., Morf, M., Harris Jr., J., S.
1996
- **Thermodynamic Analysis and Growth Characterization of thick GaN films grown by Chloride VPE using GaCl₃/N₂ and NH₃/N₂**

- Lee, H., Yuri, M., Ueda, T., Harris Jr., J., S.
1996
- **Photoluminescence Study of Chloride VPE-Grown GaN**
Ueda, T., Yuri, M., Lee, H., Harris Jr., J., S.
1996
 - **Growth of Epitaxial GaN Films Using ZnO Buffer Layer by Pulsed Laser Deposition**
Huang, T., F., Tuncel, E., Yeo, J., S., Harris Jr., J., S.
1996
 - **Chloride VPE Growth of GaN on Pulsed Laser Deposited ZnO buffer Layer**
Harris, J., S., Ueda, T., Yuri, M., Huang, T., F., Spruytte, S., Lee, H.
1996
 - **Design of Quantum Well Intersubband Transitions for Non-linear Difference Frequency Mixing** *Technical Digest IEEE/LEOS: Nonlinear Optical Meeting*
Harris Jr., J., S.
1996
 - **Deep Level Defects in GaAs on Si Substrates Grown by Atomic Hydrogen Assisted Molecular Beam Epitaxy** *J. Appl. Phys.*
Okada, Y., Harris Jr., J., S.
1996; 8 (80): 4770-4772
 - **Control of Quasi-Bound States by Electron Bragg Mirrors in GaAs/Al_{0.3}Ga_{0.7}As Quantum Wells** *Appl. Phys. Lett.*
Sung, B., Chui, H., C., Martinet, E., L., Harris Jr., J., S.
1996; 19 (68): 2720 - 2722
 - **The Mechanical Properties of NiAl Grown on GaAs by Molecular Beam Epitaxy**
Weckwerth, M., V., Harris Jr., J., S.
1996
 - **Side Gate Single Electron Transistor with Multi-Islands Structure Operated at Room Temperature made by STM/AFM Nano-Oxidation Process**
Matsumoto, K., Ishii, M., Shirakashi, J. I., Vartanian, B., J., Harris Jr., J., S.
1996
 - **Micromachined tunable Fabry-Perot filters for wavelength division multiplexing**
Larson, M., C., Harris Jr., J., S.
1996
 - **Growth of GaAs and InAlAs on High Quality, Epitaxial, NiAl Metal Film**
Hung, Y., Weckwerth, M., V., Visokay, M., R., Pao, Y., C., Harris Jr., S., J.
1996
 - **Application of Micro-Electro-Mechanical Systems to Optoelectronics**
Harris Jr., J., S.
1996
 - **Vertical cavity X-modulators for WDM** *Conference on Wavelength Division Multiplexing Components*
Powell, J. S., Trezza, J. A., Morf, M., Harris, J. S.
SPIE - INT SOC OPTICAL ENGINEERING.1996: 207-216
 - **Control of Quasi-Bound States by Electron Bragg Mirrors and electron Lifetime Measurements in GaAs/AlGaAs Quantum Wells**
Sung, B., Woods, G., L., Rella, C., W., Schwettman, H., A., Fejer, M., M., Harris, J., S.
1996
 - **Vertically Aligned and Electronically Coupled Growth Induced InAs Islands in GaAs** *Phys. Rev. Lett.*
Solomon, G., S., Trezza, J., A., Marshall, A., F., Harris Jr., J., S.
1996; 6 (76): 952 - 955
 - **Room Temperature Operation of Single Electron Transistor made by STM Nano-Oxidation Process for TiOx/Ti System** *Appl. Phys. Lett.*
Matsumoto, K., Ishii, M., Segawa, K., Oka, Y., Vartanian, B., J., Harris Jr., J., S.

1996; 1 (68): 34-36

- **Creation and Optimization of Vertical Cavity X-Modulators** *IEEE J. Quant. Elect.*
Trezza, J., A., Morf, M., Harris Jr., J., S.
1996; 1 (32): 53-60
- **Basic Analysis of Atomic-scale Growth Mechanisms for Molecular Beam Epitaxy of GaAs using atomic Hydrogen as a surfactant** *J. Vac.Sci. Technol. B*
Okada, Y., Harris Jr., J., S.
1996; 3 (14): 1725 - 1728
- **Vertical Cavity X-Modulators for Reconfigurable Optical Interconnection and Routing**
Powell, J., S., Trezza, J., A., Morf, M.
1996
- **Vapor Phase Epitaxy of GaN Using Gallium Tri-Chloride and Ammonia**
Yuri, M., Ueda, T., Lee, H., Itoh, K., Baba, T., Harris Jr., J., S.
1996
- **Size Dependence of Room Temperature Operated Side Gate Single Electron Transistor with Multi-Islands Structure made by STM/AFM Nano-Oxidation Process**
Matsumoto, K., Ishii, M., Shirakashi, J., I., Vartanian, B., J., Harris Jr., S., J.
1996
- **GaN Film Growth by a Supersonic Arcjet Plasma**
Cappelli, M., A., Kull, A., E., Schwendner, K., Lee, H., Harris Jr., S., J.
1996
- **Broad-Range Continuous Wavelength Tuning in Microelectronmechanical Vertical Cavity Surface Emitting Lasers**
Harris Jr., J., S.
1996
- **Atomic Force Microscope Chemically Induced Direct Processing**
Shimbo, B., N., Komarov, S., Vartanian, B., J., Okada, Y., Harris Jr., S., J.
1996
- **Two-State Electrically Controllable Phase Diffraction Grating Using Arrays of Vertical-Cavity Phase Flip Modulators** *IEEE Photon. Techno. Lett.*
Trezza, J., A., Harris Jr., J., S.
1996; 9 (8): 1211-1213
- **Strain Relaxation in Compositionally Graded Epitaxial Layers** *J. Vac. Sci. Techno. B*
Kim, S., D., Lord, S., M., Harris Jr., J., S.
1996; 2 (14): 642-646
- **Optical Properties and Morphology of GaN Grown by MBE on Sapphire Substrates**
Tuncel, E., Oberman, D., B., Lee, H., Ueda, T., Harris Jr., S., J.
1996
- **Switching and Hysteresis in Quantum Dot Arrays** *J. of Nanotechnology*
Duruöz, I., Clarke, R., M., Marcus, C., M., Harris Jr., J., S.
1996; 4 (7): 372 - 375
- **Raman Scattering Study of GaN Films** *J. Appl. Phys.*
Kirolov, D., Lee, H., Harris Jr., J., S.
1996; 7 (80): 4058-4062
- **Observation of Super-Structure in High-Quality Pseudomorphic Film of NiAl grown on GaAs** *J. of Crystal Growth*
Hung, C., Y., Weckwerth, M., V., Marshall, A., F., Pao, Y., C., Harris Jr., J., S.
1996; 2 (169): 201-208
- **Continuously-tunable micromachined vertical-cavity surface-emitting laser with 18 nm range** *Electr. Lett.*
Larson, M., C., Massengale, A., R., Harris Jr., J., S.

1996; 4 (32): 330-332

- **Single electron devices with various structures made by STM/AFM nano-oxidation process**
Matsumoto, K., Ishii, M., Shirakashi, J., Vartanian, B., Harris Jr., S., J.
1996
- **Fabrication of Novel Quantum Devices - Toward Room Temperature Operation of Single Electron Devices**
Harris Jr., J., S.
1996
- **Wide and Continuous Wavelength Tuning in a Vertical Cavity Surface Emitting Laser Using a Micromachined Deformable Membrane Mirror** *Appl. Phys. Lett.*
Larson, M., C., Harris Jr., J., S.
1996; 7 (68): 891-893
- **Vapor Phase Epitaxy of GaN using GaCl₃/N₂ and NH₃/N₂** *J. Crystal Growth*
Lee, H., Harris Jr., J., S.
1996: 689– 696
- **Saturation Study of III-V Multi Quantum Well Bound-to-Bound and Bound-to-Quasibound Intersubband Transitions in the 3 - 10 μ m Spectral Range** *Semicond. Sci. Technol.*
Vodopyanov, K., L., Chazapis, V., Phillips, C., C., Sung, B., Harris Jr., J., S.
1996
- **Reactive Ion Etching of Gallium Nitride Films** *J. Electric Materials*
Lee, H., Oberman, D., B., Harris Jr., J., S.
1996; 5 (25): 835-837
- **Micromachined Tunable Vertical-Cavity Surface-Emitting Lasers** *Technical Digest 1996 IEEE IEDM*
Larson, M., C., Sugihwo, F., Massengale, A., R., Harris Jr., J., S.
1996
- **Collector-up AlGaAs/GaAs heterojunction bipolar transistors using oxidized AlAs for current confinement** *Electr. Lett.*
Massengale, C., H., Larson, M., C., Dai, C., Harris Jr., J., S.
1996; 4 (32): 399-401
- **Effects of monolayer coverage, flux ratio, and growth rate on the island density of InAs islands on GaAs** *Appl. Phys. Lett.*
Solomon, G., S., Trezza, J., A., Harris Jr., J., S.
1995; 23 (66): 3161-3163
- **CHARACTERIZATION OF IN-SITU VARIABLE-ENERGY FOCUSED ION BEAM/MBE MQW STRUCTURES** *21st International Symposium on Compound Semiconductors*
Bone, D. J., LEE, H., Williams, K., Harris, J. S., Pease, R. F.
IOP PUBLISHING LTD.1995: 359–62
- **Room Temperature Operation of Single Electron Transistor made by STM Nano-Oxidation Process**
Matsumoto, K., Ishii, M., Segawa, K., Oka, Y., Vartanian, B., J., Harris Jr., J., S.
1995
- **MBE Growth of High-Quality GaAs and AlGaAs** *Molecular Beam Epitaxy: Applications to Key Materials*
Larkins, C., Harris Jr., J., S.
edited by Farrow, R., F. C.
Noyes, Park Ridge.1995: 114–274
- **Growth Induced and Patterned 0-Dimensional Quantum Structures** *in Low Dimensional Structures Prepared by Epitaxial Growth of Regrowth on Patterned Substrate*
Solomon, G., S., Duruöz, C., I., Trezza, J., A., Clarke, R., M., Marcus, C., M., Harris, J., S.
edited by Eberl et al, K.
1995: 313–324
- **Continuously Tunable Micro-Electromechanical Vertical-cavity Surface-emitting Lasers** *Internl J. Optoelectronics*

- Larson, M., C., Massengale, A., R., Harris Jr., J., S.
1995; 5 (10): 401 – 408
- **Broadly -Tunable Resonant-Cavity Light-emitting Diode** *IEEE Photonics Technology Lett.*
Larson, M., C., Harris Jr., J., S.
1995; 11 (7): 1267 - 1269
 - **Periodic Mode Shift in Vertical Cavities Grown by Molecular Beam Epitaxy**
Eng, L., E., Toh, K., Chang-Hasnain, C., J., Bacher, K., Harris Jr., J., S.
1995
 - **Comparison of Experimental and Theoretical Results of Room Temperature Operated Single Electron Transistor made by STM/AFM Nano - Oxidation Process**
Matsumoto, K., Ishii, M., Segawa, K., Oka, Y., Vartanian, B., J., Harris Jr., J., S.
1995
 - **Tunable Mid-Infrared Generation by Difference Frequency Mixing of Diode Laser Wavelengths in Intersubband InGaAs / AlAs Quantum Wells**
Chui, H., C., Woods, G., L., Fejer, M., M., Martinet, E., L., Harris Jr., J., S.
1995
 - **Threshold, Switching, and Hysteresis in Quantum Dot Arrays** *Phys. Rev. Lett.*
Duröz, C., I, Clarke, R., M., Marcus, C., M., Harris Jr., J., S.
1995; 16 (74): 3237-3240
 - **Observation of 1.5 μ m Quantum Confined Stark Effect in InGaAs/AlGaAs Multiple Quantum Wells on GaAs Substrates** *J. of Vac. Sci. Tech.*
Kim, S., D., Trezza, J., A., Harris Jr., J., S.
1995; 4 (B 13): 1526 - 1528
 - **Epitaxial growth of thick pseudomorphic NiAl metal films on GaAs by migration enhanced epitaxy** *J. Crystal Growth*
Weckwerth, M., V., Hung, C., Y., Pao, Y., C., Harris Jr., J., S.
1995; 150: 1150 – 1153
 - **A Wet Etching Technique for Accurate Etching of GaAs/AlAs Distributed Bragg Reflectors** *J. Electrochem. Soc.*
Bacher, K., Harris Jr., J., S.
1995; 7 (142): 2386 – 2388
 - **Wavelength Shift in Vertical Cavity Laser Arrays on a Patterned Substrate**
Eng, L., E., Bacher, K., Yuen, W., Larson, M., Ding, G., Harris Jr., J., S.
1995
 - **Substrate temperature and monolayer coverage effects on epitaxial ordering of InAs and InGaAs islands on GaAs**
Solomon, G., S., Trezza, J., A., Harris Jr., J., S.
1995
 - **MBE growth of gan with ECR plasma and hydrogen azide**
Oberman, D., B., Lee, H., Gotz, W., K., Harris Jr., J., S.
1995
 - **Heteroepitaxial growth of GaN on GaAs by ECR plasma-assisted MBE**
Lee, H., Oberman, D., B., Gotz, W., Harris Jr., J., S.
1995
 - **Effect of substrate miscut on the structural-properties of ingaas linear graded buffer layers grown by molecular-beam epitaxy on GaAs**
Eldredge, J., W., Matney, K., M., Goorsky, M., S., Chui, H., C., Harris Jr., J., S.
1995
 - **Coupled Quantum Wells for Optical Modulation** *Confined Electron and Photon Systems*
Trezza, J., A., Harris Jr., J., S.
edited by Burnstein, E., Weisbuck, C.
Plenum Press.1995: 759–764

- **Vertical Coupled-Cavity Microinterferometer on GaAs with deformable-membrane top mirror** *IEEE Photonics Technology Lett.*
Larson, M., Pezeshki, B., Harris Jr., J., S.
1995; 4 (7): 382 - 384
- **Temperature Dependence of Phase Breaking in Ballistic Quantum Dots** *Phys. Rev. B*
Clarke, R., M., Chan, I., H., Marcus, C., M., Duruöz, C., I., Harris Jr., J., S., Campman, K.
1995; 4 (52): 2656-2659
- **Reactive ion etching of GaN using CHF₃/Ar and C₂F₅/Ar plasmas** *Appl. Phys. Lett.*
Lee, H., Oberman, D., B., Harris Jr., J., S.
1995; 12 (67): 1754 – 1756
- **Multiple Wavelength Vertical Cavity Laser Arrays on Patterned Substrates** *IEEE J. of Select Topics in Quantum Electronics*
Eng, L., E., Bacher, K., Yuen, W., Harris Jr., J., S., Chang-Hasnain, C., J.
1995; 1: 624 - 628
- **Interface Smoothing of High Indium Content InGaAs Layers on GaAs** *J. Electrochem. Soc.*
Kim, S., D., Lee, H., J., Harris Jr., J., S.
1995; 5 (142): 1667-1670
- **Intersubband Transitions to the Above-Barrier States Controlled by Electron Bragg Mirrors**
Sung, B., Chui, H., C., Martinet, E., L., Harris Jr., J., S.
1995
- **Coupled Quantum Wells for Optical Modulation**
Trezza, J., A., Harris Jr., J., S.
1995
- **Fabrication of GaAs Orientation Template Substrates for Quasi-Phasematched Guided-Wave Nonlinear Optics** *Nonlinear Guided Waves and Their Applications, OSA Technical Digest Series Optical Society of America, Washington DC*
Eyes, L., A., Ebert, C., B., Chui, H., C., Harris Jr., J., S., Fejer, M., M.
1995: 156-158
- **Broadly Tunable Resonant-cavity Light Emission** *Appl. Phys. Lett.*
Larson, M., C., Harris Jr., J., S.
1995; 5 (67): 590 - 592
- **2-dimensional analysis of self-sustained pulsation for narrow-stripe AlGaAs lasers** *IEEE J. Selected Topics Quantum Electronics*
Yuri, M., Harris Jr., J., S., Takayama, T., Imafuji, O., Naito, H., Kume, M.
1995; 2 (1): 473-479
- **Growth Induced and Patterned 0-Dimensional Quantum Structures**
Harris, J., S., Solomon, G., S., Duruöz, C., I., Trezza, J., A., Clarke, R., M., Marcus, C., M.
1995
- **GaAs-on-Ge Heteroepitaxy by Atomic Hydrogen-Assisted Molecular Beam Epitaxy**
Okada, Y., Harris Jr., J., S., Sutoh, A., Kawabe, M.
1995
- **MBE Growth of High Tc Superconductors** *Molecular Beam Epitaxy: Applications to Key Materials*
Schlom, D., G., Harris Jr., J., S.
edited by Farrow, R., F. C.
Noyes, Park Ridge.1995: 505–622
- **Periodically Induced Mode Shift in Vertical Cavity Fabry Perot Etalons Grown by Molecular Beam Epitaxy** *Photon. Techn. Lett.*
Eng, L., E., Toh, K., Chang-Hasnain, C., J., Bacher, K., Harris Jr., J., S.
1995; 3 (7): 235-237
- **Molecular beam epitaxy of gallium nitride by electron cyclotron resonance plasma and hydrogen azide** *J. Crystal Growth*
Oberman, D., B., Lee, H., Göt, W., K., Harris Jr., J., S.

1995; 150: 912 – 915

- **Modeling of Turn-on Jitter in Vertical Cavity Surface Emitting Lasers** *Elec. Lett.*
Harris, J., S., Ding, G., Y., Corzin, S., W., Tan, M., R., Wang, S., Y.
1995
- **Growth and Characterization of Epitaxial Strontium Barium Niobate Thin Films Prepared by Pulsed Laser Deposition** *J. of Electronic Materials*
Schwyn-Thöny, S., Youden, K., E., Harris Jr., J., S., Hesselink, L.
1995
- **50 nm GaAs/AlAs wire structures grown on corrugated GaAs** *J. Vac. Sci. Technol.*
Miller, D., J., Harris Jr., J., S.
1994; 2 (B12): 1286 - 1289
- **Large Energy Intersubband Transitions in High Indium Content InGaAs/AlGaAs Quantum Wells** *NATO ASI: Quantum Well Intersubband Transition Physics and Device*
Chui, H., C., Martinet, E., L., Fejer, M., M., Harris Jr., J., S.
Kluwer Academic Publishers.1994: 251–9
- **Short Wavelength Intersubband Transitions in InGaAs/AlGaAs quantum wells grown on GaAs** *Appl. Phys. Lett.*
Chui, H., C., Martinet, W., L., Fejer, M., M., Harris Jr., J., S.
1994; 6 (64): 736-8
- **Growth of Epitaxial Strontium Barium Niobate Thin Films by Pulsed Laser Deposition** *Appl. Phys. Lett.*
Thöny, S., Schwyn, Youden, K., E., Harris Jr., J., S., Hesselink, L.
1994; 16 (65): 2018–2020
- **Reflection high-energy electron diffraction intensity oscillations during molecular beam epitaxy on rotating substrates** *J. Vac. Sci. Technol.*
van der Wagt, J., P. A., Harris Jr., J., S.
1994; 2 (B 12): 1236-8
- **MBE Growth of In_{0.65}Ga_{0.35}As Quantum Wells on GaAs Substrates for 1.5 μ m Exciton Resonance** *J. Crystal Growth*
Kim, S., D., Lee, H., Harris Jr., J., S.
1994: 37-43
- **Growth Studies on In_{0.5}Ga_{0.5}As / AlGaAs Quantum Wells Grown on GaAs with a Linearly Graded InGaAs Buffer** *J. Vac. Sci. Technol*
Chui, H., C., Harris Jr., J., S.
1994; 2 (B12): 1019-1022
- **Creation and Optimization of Vertical Cavity Phase Flip Modulators** *J. of Appl. Phys.*
Trezza, J., A., Harris Jr., J., S.
1994; 10 (75): 4878-4884
- **I-V Kink in InAlAs/InGaAs MODFETs due to Weak Impact Ionization Process in the InGaAs Channel**
Zhou, G., G., Fischer-Colbrie, A., Harris Jr., J., S.
1994
- **Free-electron laser nonlinear spectroscopy of doubly resonant (5.5-3.0 μ m and 4.1- 2.1 μ m) InGaAs/AlGaAs asymmetric quantum wells**
Martinet, E., L., Woods, G., L., Chui, H., C., Harris Jr., J., S., Fejer, M., M., Rella, C., A.
edited by Dohler, G., H., Koteles, E., S.
1994
- **Applications of High Indium Content InGaAs/AlGaAs Quantum Wells in the 2-7 μ m Regime** *NATO ASI: Quantum Well Intersubband Transition Physics and Devices*
Martinet, E., L., Vartanian, B., J., Woods, G., L., Chui, H., C., Harris Jr., J., S.
edited by Liu, H., C., Levine, B., F., Andersson, J., Y.
Kluwer Academic Publishers.1994: 261–273
- **The use of graded InGaAs layers and patterned substrates to remove threading dislocations from GaAs on Si**
Knall, J., Romano, L., T., Biegelsen, D., K., Bringans, R., D., Chui, H., C., Harris Jr., J., S.

1994

- **Reflectance and Raman Spectra of Metallic Oxides, LaSrCoO and CaSrRuO: Resemblance to Superconducting Cuprates**
Bozovic, I., Kim, J., H., Harris Jr., J., S., Eom, C., B., Phillips, J., M., Cheung, J., T.
1994
- **Observation of Quantum Mechanical Reflections of Electrons at an In-situ Grown GaAs / Aluminum Schottky Barrier** *J. Vac. Sci. Technol.*
Weckwerth, M., V., Wagt, J., P. A. van der, Harris Jr., J., S.
1994; 2 (B 12): 1303-5
- **Short Wavelength (5.36 μm to 1.85 μm) Nonlinear Spectroscopy of Coupled InGaAs / AlAs Intersubband Quantum Wells**
Martinet, E., L., Chui, H., C., Woods, G., L., Fejer, M., M., Harris Jr., J., S.
1994
- **Normal-incidence intersubband hole absorption in In_{0.5}Ga_{0.5}As/Al_{0.45}Ga_{0.55}As quantum wells**
Vartanian, B., J., Harris Jr., J., S.
1994
- **Local vibrational modes in Mg-doped gallium nitride** *Phys. Rev. B*
Brandt, M., S., Ager III, J., W., Götz, W., Johnson, N., M., Harris Jr., J., S., Molnar, R., J.
1994; 49: 14758 - 14761
- **Doubly resonant second harmonic generation of 2.0 μm light in coupled InGaAs/AlAs Quantum Wells** *Appl. Phys. Lett.*
Chui, H., C., Martinet, E., L., Woods, G., L., Fejer, M., M., Harris Jr., J., S.
1994; 25 (64): 3365 - 3367
- **Determination of AlAs mole fraction in Al_xGa_{1-x}As using Raman spectroscopy and x-ray diffraction** *J. Vac. Sci. Technol.*
Solomon, G., S., Kirillov, D., Chui, H., C., Harris Jr., J., S.
1994; 2 (B12): 1078-1081
- **Phase-Breaking Rates from Conductance Fluctuations in a Quantum Dot**
Marcus, C., M., Clarke, R., M., Chan, I., H., Duruöz, C., I., Harris Jr., J., S.
1994
- **Observation of Resonant Tunneling Through Localized Continuum States in Electron Wave Interference Diodes** *Appl. Phys. Lett.*
Carnahan, R., E., Maldonado, M., A., Martin, K., P., Higgins, R., J., Van der Wagt, J., P. A., Harris Jr., J., S.
1994; 18 (64): 2403-2405
- **High Contrast Asymmetric Fabry-Perot** *Appl Phys. Lett.*
Trezza, J., A., Pezeshki, B., Larson, M., C., Lord, S., M., Harris Jr., J., S.
1993; 74: 452-454
- **Large, Low-Voltage Absorption Changes and Absorption Bistability in GaAs/AlGaAs/InGaAs Asymmetric Quantum Wells** *J. Appl. Phys.*
Trezza, J., A., Larson, M., C., Lord, S., M., Harris Jr., J., S.
1993; 74: 1972-1978
- **Electroabsorption Modulators Operating at 1.3 μm on GaAs substrates** *Optical and Quantum Electronics*
Lord, S., M., Pezeshki, B., Harris Jr., J., S.
1993; 25: 5953-5964
- **The Effect of Si Planar Doping on DX Centers in Al_{0.26}Ga_{0.74}As** *J. Crystal. Growth.*
Solomon, G., S., Roos, G., Harris Jr., J., S.
1993; 127: 737-741
- **1.3 μm Electroabsorption Reflection Modulators on GaAs** *Appl. Phys. Lett.*
Lord, S., M., Trezza, J., A., Larson, M., C., Pezeshki, B., Harris Jr., J., S.
1993; 63: 806-808
- **Schwabish Gmundt, Germany**
Wagt, J., P. A van, Harris Jr., J., S.

1993

- **1.3 μm Exciton Resonances in InGaAs Quantum Wells Grown by Molecular Beam Epitaxy Using a Slowly Graded Buffer Layer**
Lord, S., M., Pezeshki, B., Kim, S., D., Harris Jr., J., S.
1993
- **Low Voltage, Low Chirp, Absorptively Bistable Transmission Modulators Using Type IIA and Type IIB In_{0.3}Ga_{0.7}As/Al_{0.33}Ga_{0.67}As/In_{0.15}Ga_{0.85}As Asymmetric Coupled Quantum Wells** *J. Appl. Phys.*
Trezza, J., A., Larson, M., C., Lord, S., M., Harris, J., S.
1993; 11 (74): 6495-6502
- **Lattice-Mismatched InGaAs Double Heterojunction Bipolar Transistors Grown on GaAs Substrates** *Jpn. J. Appl. Phys. Part 1*
Ito, H., Harris Jr., J., S.
1993; 32 (11A): 4923-4927
- **Critical Passivation Ledge Thickness in AlGaAs/GaAs Heterojunction Bipolar Transistors** *J. Vac. Sci. Technol.*
Liu, W., Harris, J., S.
1993; B 11: 6-9
- **Zero Chirp Quantum Well Asymmetric Fabry-Perot Reflection Modulators Operating Beyond the Matching Condition** *J. Appl. Phys.*
Trezza, J., A., Larson, M., C., Harris Jr., J., S.
1993; 12 (74): 7061-7066
- **Surface-emitting Second-harmonic Generation in a Semiconductor Vertical Resonator** *Optics Lett.*
Lodenkamper, R., Bortz, M., L., Fejer, M., M., Bacher, K., Harris Jr., J., S.
1993; 21 (18): 1798-1800
- **Intersubband Transitions in High Indium Content InGaAs/AlGaAs Quantum Wells** *Appl. Phys. Lett.*
Chui, H., C., Lord, S., M., Martinet, E., Fejer, M., M., Harris Jr., J., S.
1993; 3 (63): 364-366
- **Hydrogen Passivation of Nonradiative Defects in InGaAs/Al_xGa_{1-x}As Quantum Wells** *J. Appl. Phys.*
Lord, S., M., Roos, G., Harris, J., S., Johnson, N., M.
1993
- **High Contrast Reflection Electro-absorption Modulators with Zero Phase Change** *Appl. Phys. Lett.*
Trezza, J., S., Pezeshki, B., Larson, M., C., Lord, S., M., Harris Jr., J., S.
1993; 63: 452-454
- **Cut-off Frequency and D.C. Gain of Heterojunction Bipolar Transistors** *Int. J. Electronics*
Liu, W., Harris Jr., J., S.
1993; 74: 401-106
- **The Effect of Si Doping on DX Centers in Al_{0.26}Ga_{0.74}As**
Solomon, G., S., Roos, G., Harris Jr., J., S.
1993
- **Graded Buffer Layers for Molecular Beam Epitaxial Growth of High In Content InGaAs On GaAs for Optoelectronics**
Lord, S., M., Pezeshki, B., Marshall, A., F., Harris Jr., J., S., Fernandez, R., Harwit, A.
1993
- **Simulation of RHEED Intensity Oscillations During MBE Growth** *J. Crystal. Growth.*
van der Wagt, J., P. A., Harris Jr., J., S.
1993; 127: 1025-1029
- **Phase Characteristics of Reflection Electro-Absorption Modulators** *Appl. Phys. Letts.*
Liu, D., Pezeshki, B., Lord, S., M., Harris Jr., J., S.
1993; 62: 2158-2160
- **Lattice Mismatched InGaAs Double Heterojunction Bipolar Transistors Grown on GaAs Substrates** *IEEE Trans. Ed*
Ito, H., Harris Jr., J., S.

1993

- **Enhancement of Photoluminescence Intensity in InGaAs/Al(x)Ga(1-x)As Quantum Wells by Hydrogenation** *Appl. Phys. Lett.*
Lord, S., M., Roos, G., Pezeshki, B., Harris Jr., J., S., Johnson, N., M.
1992; 60: 2276-2278
- **Stacking Fault Stability in GaAs/Si Hetero-Epitaxial Growth** *Crystal Growth*
Kim, S., D., Harris Jr., J., S.
1992; 123: 439-444
- **Molecular Beam Epitaxy Growth of Vertical Cavity Optical Devices with In-Situ Corrections** *Appl. Phys. Lett.*
Bacher, K., Pezeshki, B., Lord, S., M., Harris Jr., J., S.
1992; 61: 1387-1889
- **Ideality Factor of Extrinsic Base Surface Recombination Current in AlGaAs/GaAs Heterojunction Bipolar Transistors** *Elect. Lett.*
Harris, J., S., Liu, W.
1992; 28: 379-380
- **High-Performance Microwave AlGaAs-InGaAs Pnp HBT with High-DC Current Gain** *IEEE Microwave & Guided Wave Letts.*
Liu, W., Costa, D., Hill D., Harris Jr., J., S.
1992: 331-333
- **Geometrical Growth Rate Nonuniformity Effects on Reflection High-Energy Electron Diffraction Signal Intensity Decay** *J. Vac. Sci. Technol. B*
van der Wagt, J., P. A., Bacher, K., L., Solomon, G., S., Harris Jr., J., S.
1992: 825-828
- **Effects of Replacing a Portion of the AlGaAs Base-Emitter Junction of Heterojunction Bipolar Transistors by GaAs** *Int. Jml. Elect.*
Liu, W., Harris Jr., J., S.
1992; 72: 401-408
- **Design and Performance of a Low-Threshold-Current Grating-Coupled Surface-Emitting Laser** *Solid State Elect.*
Takigawa, S., Bacher, K., Aronson, L., B., Harris Jr., J., S.
1992; 35: 1241-1245
- **Derivation of the Emitter-Collector Transit Time of Heterojunction Bipolar Transistors** *Solid State Elect.*
Liu, W., Costa, D., Harris Jr., J., S.
1992; 35: 541-545
- **Dependence of the Base Crowding Effect on Base Doping and Thickness for Npn AlGaAs/GaAs HBTs** *Elect. Lett.*
Liu, W., Harris, J., S.
1992; 22 (27): 2048-2050
- **Contact Impedance in Heterojunction Bipolar Transistors** *Solid State Elect.*
Liu, W., Dai, C., Harris Jr., J., S.
1992; 35: 547-552
- **Hydrogen Passivation of Defects in InGaAs/AlxGa1-xAs Quantum Wells**
Lord, S., M., Roos, G., Pezeshki, B., Harris Jr., J., S.
1992
- **Optical Phase Modulator Utilizing Electroabsorption in a Fabry-Perot Cavity** *Appl. Phys. Lett.*
Pezeshki, B., Williams, G., A., Harris Jr., J., S.
1992; 60: 1061-1063
- **Nonlinear Optical Properties and Ultrafast Response of GaAs/AlAs Type-II Quantum Wells** *IEEE JQE*
Fu, W., S., Harris Jr., J., S., Binder, R., Koch, S., W., Klem, J., F., Olbright, G., R.
1992; 28: 2404-2415
- **Low-Conductance Drain (LCD) Design of InAlAs/InGaAs/InP HEMT's** *IEEE Electron Dev. Lett.*
Pao, Y., C., Harris Jr., J., S.

1992; 13: 535-537

● **Low Threshold Current Grating-Coupled Surface-Emitting Strained-InGaAs Single Quantum Well Laser with GaAs Optical Confinement Structure** *Appl. Phys. Lett.*

Takigawa, S., Bacher, K., Aronson, L., B., Harris Jr., J., S.
1992; 60: 265-267

● **Free Chare-Carrier Plasmons in Ba_{1-x}KxBiO₃: A Close Relation to Cuprate Superconductors** *Phys. Rev. B*

Bozovic, I., Kim, J., H., Harris, J., S., Hellman, E., S., Hartford, E., H., Chan, P., K.
1992; 46: 1182-1187

● **Effects of Emitter-Base Contact Spacing on the Current Gain in Heterojunction Bipolar Transistors** *Jpn. J. Appl. Phys.*

Liu, W., Harris, J., S.
1992; 31: 2349-2351

● **Current Gain of Graded AlGaAs/GaAs Heterojunction Bipolar Transistors With and Without a Base Quasi-Electric Field** *IEEE Tran. Elect. Dev.*

Liu, W., Costa, D., Harris Jr., J., S.
1992; 39: 2422-2429

● **Current Dependence of Base-Collector Capacitance of Bipolar Transistors** *Solid State Elect.*

Liu, W., Harris Jr., J., S.
1992; 35: 1051-1057

● **A High-Gain AlGaAs/GaAs Heterojunction Bipolar Transistor Grown on Silicon Substrate** *Jpn. J. Appl. Phys.*

Harris, J., S., Liu, W., Kim, S., D.
1992; 31: 2656-2659

● **1.3 μm Exciton Resonances in InGaAs Quantum Wells Grown by Molecular Beam Epitaxy Using a Slowly Graded Buffer Layer** *J. Crystal Growth.*

Lord, S., M., Pezeshki, B., Kim, S., D., Harris, J., S.
1992: 759-764

● **Monolithic Integration GaAs and Si Bipolar Devices for Optical Interconnect Systems**

Nasserbakht, G., N., Adkisson, J., W., Wooley, B., A., Harris Jr., J., S., Kamins, T., I., Wong, S., S.
1992

● **X-Valley Tunneling in Single AlAs Barriers** *J. Appl. Phys.*

Boykin, T., B., Harris Jr., J., S.
1992; 72: 988-992

● **InGaAs Double Heterojunction Bipolar Transistors Grown on GaAs Substrate** *Electronics Letters*

Ito, H., Harris Jr., J., S.
1992; 7 (28): 655-656

● **Diode Ideality Factor for Surface Recombination Current in AlGaAs/GaAs Heterojunction Bipolar Transistors** *IEEE Trans. Elect. Dev.*

Liu, W., Harris, J., S.
1992; 39: 2726-2732

● **An Advantage of Pnp over Npn AlGaAs/GaAs Heterojunction Bipolar Transistors for Microwave Power Applications** *Jpn. J. Appl. Phys.*

Liu, W., Dai, C., Harris Jr., J., S.
1992; 31: L452-L454

● **Visible Wavelength Fabry-Perot Reflection Modulator Using Indirect-Gap AlGaAs/As** *Elect. Lett*

Pezeshki, B., Liu, D., Lord, S., M., Harris Jr., J., S.
1992; 28: 1170-1171

● **Parastic Conduction Current in the Passivation Ledge of AlGaAs/GaAs Heterojunction Bipolar Transistors** *Solid State Elect.*

Liu, W., Harris Jr., J., S.
1992; 35: 891-895

● **Optical Gain and Ultrafast Nonlinear Response in GaAs/AlAs Type-II Quantum Wells** *Appl. Phys. Lett.*

Fu, W., S., Olbright, G., R., Klem, J., F., Harris Jr., J., S.

1992; 14: 1661-1663

- **Mesa Surface Recombination Current in AlGaAs/GaAs Heterojunction Bipolar Transistors with an Emitter-Base-Emitter Structure** *J. Vac. Sci. Technol. B*
Liu, W., Harris, J., S.
1992: 1285-1290
- **Low-Frequency Noise Properties of N-p-n AlGaAs/GaAs Heterojunction Bipolar Transistors** *IEEE Trans. Elect. Dev.*
Costa, D., Harris Jr., J., S.
1992; 39: 2383-2394
- **Investigation of High In Content InGaAs Quantum Wells Grown on GaAs by Molecular Beam Epitaxy** *Elect. Lett.*
Lord, S., M., Pezeshki, B., Harris Jr., J., S.
1992; 28: 1193-1195
- **Hydrogen Passivation of Si and Be Dopants in InAlAs**
Roos, G., Johnson, N., M., Pao, Y., C., Harris Jr., J., S., Herring, C.
1992
- **Noninterferometric Optical Subtraction using Reflection-Electroabsorption Modulators** *Optics Letters*
Shoop, B., L., Pezeshki, B., Goodman, J., W., Harris Jr., J., S.
1992; 17: 58-60
- **Laser-Power Stabilization Using a Quantum-Well Modulator** *IEEE Photonics Tech. Lett.*
Shoop, B., L., Pezeshki, B., Goodman, J., W., Harris Jr., J., S.
1992; 4: 136-139
- **Influence of Dislocations on the DC Characteristics of AlGaAs/GaAs Heterojunction Bipolar Transistors** *IEEE Elect. Dev. Lett.*
Ito, H., Nakajima, O., Furuta, T., Harris Jr., J., S.
1992; 13: 232-234
- **Anti-Resonances in the Transmission of a Simple Two-State Model** *Phys. Rev. B*
Boykin, T., B., Pezeshki, B., Harris Jr., J., S.
1992; 19 (46): 12769-12772
- **Strained InGaAs/GaAs single quantum well lasers with saturable absorbers fabricated by quantum well intermixing** *Appl. Phys. Lett.*
Yamada, N., Harris, J., S.
1992; 20 (60): 2463-65
- **GaAs/AlAs Quantum Wells for Electroabsorption Modulators** *Appl. Phys. Lett.*
Pezeshki, B., Lord, S., M., Boykin, T., B., Harris Jr., J., S.
1992; 60: 2779-2781
- **AlGaAs/AlAs QW Modulator for 6328Å Operation** *Elect. Letts.*
Pezeshki, B., Lord, S., M., Boykin, T., B., Shoop, B., L., Harris Jr., J., S.
1991; 27: 1971-1973
- **Direct Extraction of the AlGaAs/GaAs Heterojunction Bipolar Transistor Small-Signal Equivalent Circuit** *IEEE Transactions on Electron Dev.*
Costa, D., Liu, W., Harris Jr., J., S.
1991; 38: 2018-2024
- **Lateral Resonant Tunneling Transistors Employing Field-Induced Quantum Wells and Barriers**
Chou, S., Y., Allee, D., R., Pease, R., F., Harris Jr., J., S.
1991
- **Geometrical Growth Rate Nonuniformity Effects on RHEED Signal Intensity Decay**
Wagt, J., P. A. van der, Bacher, K., L., Solomon, G., S., Harris Jr., J., S.
1991
- **Femtosecond Gain Dynamics in Semiconductors**
Harris, J., S., Fu, W., S., Poirier, G., E., Bryan, R., P., Klem, J., F., Olbright, G., R.

1991

- **Thermal Dissociation Energy of the Si-H Complex in n-type GaAs** *Appl. Phys. Lett.*
Roos, G., Johnson, N., M., Herring, C., Harris, J., S.
1991; 59: 461-463
- **Second-Order Susceptibility in Asymmetric Quantum Wells and its Control by Proton Bombardment** *Appl. Phys. Lett.*
Yoo, S., J. B., Fejer, M., M., Byer, R., L., Harris Jr., J., S.
1991; 58: 1724-1726
- **Optical Study of Plasmons in $Tl_2Ba_2Ca_2Cu_3O_{10}$** *Phys. Rev.*
Bozovic, I., Kim, J., H., Harris Jr., J., S., Lee, W., Y.
1991; 43: 1169-1172
- **Ballistic Electron Contributions in Vertically Integrated Resonant Tunneling Diodes** *Superlattices & Microstructures*
Harris, J., S., Rascol, J., J. L., Martin, K., P., Carnahan, R., E., Higgins, R., J., Cury, L.
1991; 10: 175-178
- **Accurate Measurement of MBE Substrate Temperature** *J. Crystal Growth*
Lee, W., S., Yoffee, G., W., Schlom, D., G., Harris Jr., J., S.
1991; 111: 131-135
- **Reflection Electro-Absorption Modulator with High Reflectivity Change in a Novel Normally-Off Configuration**
Thomas, D., Pezechki, B., Harris Jr., J., S.
1991
- **Reduction of Low-Frequency Noise In Npn AlGaAs/GaAs HBTs**
Costa, D., Liu, W., Harris Jr., J., S.
1991
- **Electro-Absorption in InGaAs/AlGaAs Quantum Wells**
Pezeshki, B., Lord, S., M., Harris Jr., J., S.
1991
- **Dynamic Optical Grating for Laser Beam Steering Applications**
Pezeshki, B., Apte, R., Lord, S., M., Harris Jr., J., S.
1991
- **Accumulation mode GaAlAs/GaAs bipolar transistor**
Harris, J., S., Matsumoto, K., Ishii, M., Morozumi, H., Imai, S., Sakamoto, K.
1991
- **Threshold Reduction in Strained InGaAs Single Quantum Well Lasers by Rapid Thermal Annealing** *Appl Phys. Lett.*
Yamada, N., Roos, G., Harris Jr., J., S.
1991; 59: 1040-1042
- **Plasmons in High-Temperature Superconductors** *Physica C*
Kim, J., H., Bozovic, I., Harris Jr., J., S., Lee, W., Y., Eom, C., B., Geballe, T., H.
1991; 185: 1019-1020
- **Enhancement of Optical Reflectivity of High-Tc Superconducting Films by Ion Milling** *Appl. Phys. Letts.*
Kim, J., H., Char, K., Bozovic, I., Lee, W., Y., Kapitulnik, A., Harris Jr., J., S.
1991; 58: 2558-2560
- **A Tight Binding Model for GaAs/AlAs Resonant Tunnel Diodes** *Phys. Rev.B*
Boykin, T., B., van der Wagt, J., P. A., Harris Jr., J., S.
1991; 43: 4777-4784
- **Plasmons in High -Tc Cuprate Superconductors**
Kim, J., H., Bozovic, I., Harris Jr., J., S., Lee, W., Y., Eom, C., B., Geballe, T., H.
edited by Ashkenazy, J., Vezzol, G.

1991

- **Physical Origin of the High Output Conductance in In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As/InP HEMTs**
Pao, Y., C., Harris Jr., J., S.
1991
- **Accumulation mode GaAlAs/GaAs bipolar transistor with two dimensional hole gas base**
Harris, J., S., Matsumoto, K., Ishii, M., Morozumi, H., Imai, S., Sakamoto, K.
1991
- **Surface Emitting Second Harmonic Generation in Vertical Resonator** *Elect. Letts.*
Lodenkamper, R., Fejer, M., M., Harris Jr., J., S.
1991; 27: 1882-1884
- **Preparation of Optically Smooth Surfaces of High-Tc Superconducting Films**
Kim, J., H., Kapitulnik, A., Harris Jr., J., S., Char, K., Bozovic, I., Lee, W., Y.
1991
- **Low-Frequency Noise Characterization of Npn AlGaAs/GaAs Heterojunction Bipolar Transistors**
Costa, D., Harris, J., S.
1991
- **Femtosecond-gain Spectroscopy of GaAs**
Kim, J., H., Kapitulnik, A., Harris Jr., J., S., Char, K., Bozovic, I., Lee, W., Y.
1991
- **Theoretical Comparison of Base Bulk Recombination Current and Surface Recombination Current of a MESA AlGaAs/GaAs Heterojunction Bipolar Transistor** *Solid State Electronics*
Liu, W., Costa, D., Harris Jr., J., S.
1991; 34: 1119-1123
- **The Design of GaAs Resonant Tunneling Diodes with Peak Current Densities over 2×10^5 a cm⁻²** *J. Appl Phys.*
Wolak, E., Ozbay, E., Park, B., G., Diamond, S., K., Bloom, D., M., Harris Jr., J., S.
1991; 69: 3345-3350
- **Study of Optical Plasmons InLa_{1.85}Sr_{0.15}Cu₂O₄** *Physica C*
Harris, J., S., Kim, J., H., Bozovic, I., Eom, C., B., Geballe, T., H.
1991; 174: 435-439
- **Quantum Well Modulators for Optical Beam Steering Applications** *IEEE Phot. Tech. Lett.*
Pezeshki, B., Apte, R., B., Lord, S., M., Harris, J., S.
1991; 3: 790-792
- **Novel Cavity Design for High Reflectivity Changes in a Normally Off Electroabsorption Modulator** *Appl. Phys. Lett.*
Pezeshki, B., Thomas, D., Harris Jr., J., S.
1991; 58: 813-815
- **Electroabsorptive Modulators in InGaAs/AlGaAs** *Appl Phys. Lett.*
Pezeshki, B., Lord, S., M., Harris Jr., J., S.
1991; 59: 888-890
- **Effect of High Current Density and Doping Concentration on the Characteristics of GaAs/AlAs Vertically Integrated Resonant Tunneling Diodes** *J. Appl. Phys.*
Park, B., G., Wolak, E., Harris Jr., J., S.
1991; 11 (70): 7141 - 7148
- **Comparison of the Effects of Surface Passivation and Base Quasi-Electric Fields on the Current Gain of AlGaAs/GaAs Heterojunction Bipolar Transistors Grown on GaAs and Si Substrates** *Appl Phys. Lett.*
Liu, W., Costa, D., Harris Jr., J., S.
1991; 59: 691-693

- **The Relative Effect on the Oxygen Concentration in YBa₂Cu₃O_{7-d} of Atomic and Ionic Oxygen Fluxes, Produced by a Small Compact Electron Cyclotron Resonance Source** *J. Vac. Sci. Technol.*
Yamamoto, K., Hammond, R., H., Harris Jr., J., S.
1991; A9: 2587-2593
- **Molecular Beam Epitaxial Growth and Structural Design In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As/InP HEMTs** *J. Crystal. Growth*
Pao, Y., C., Harris Jr., J., S.
1991; 111: 489-494
- **High Output Conductance of InAlAs/InGaAs/InP MODFET due to Weak Impact Ionization in the InGaAs Channel** *IEDM Technical Digest*
Harris, J., S., Zhou, G., G., Fischer-Colbrie, A., Miller, J., Pao, Y., C., Hughes, B.
1991: 247-250
- **OPTIMIZATION OF MODULATION RATIO AND INSERTION LOSS IN REFLECTIVE ELECTROABSORPTION MODULATORS** *APPLIED PHYSICS LETTERS*
Pezeshki, B., Thomas, D., Harris, J. S.
1990; 57 (15): 1491-1492
- **ATOMICALLY LAYERED HETEROEPITAXIAL GROWTH OF SINGLE-CRYSTAL FILMS OF SUPERCONDUCTING Bi₂Sr₂Ca₂Cu₃O_x** *APPLIED PHYSICS LETTERS*
Eckstein, J. N., Bozovic, I., VONDESSONNECK, K. E., Schlom, D. G., Harris, J. S., BAUMANN, S. M.
1990; 57 (9): 931-933
- **NOVEL DOUBLY SELF-ALIGNED ALGAAS/GAAS HBT** *ELECTRONICS LETTERS*
LIU, W. U., Costa, D., Harris, J.
1990; 26 (17): 1361-1362
- **IMPROVED DESIGN OF ALAS/GAAS RESONANT TUNNELING DIODES** *APPLIED PHYSICS LETTERS*
Cheng, P., Harris, J. S.
1990; 56 (17): 1676-1678
- **Growth of untwinned Bi₂Sr₂Ca₂Cu₃O_x Thin Films by Atomically Layered Epitaxy** *Appl. Phys. Lett.*
Eckstein, J., N., Bozovic, I., Dessonneck, K., E. von, Schlom, D., G., Harris Jr., J., S., Baumann, S., M.
1990: 1049-1051
- **Superstructure in Thin Films of Bi-Based Compounds on MgO** *J. J. Appl. Phy*
Harris, J., S., Kojima, K., Schlom, D., G., Kuroda, K., Tanioku, M., Hamanaka, K.
1990; 9: L1638-L1641
- **From Bloch Functions to Quantum Wells** *International J. Modern Physics B*
Harris Jr., J., S.
1990; 6 (4): 1149-1179
- **A High Frequency Pnp AlGaAs/InGaAs Heterojunction Bipolar Transistor with an Ultrathin Strained Base** *Electron. Lett.*
Liu, W., Hill, D., G., Harris Jr., J., S.
1990; 26: 2000-2002
- **Optical Anisotropy of Bi₂Sr₂CaCu₂O₈** *Phys. Rev.*
Kim, J., H., Bozovic, I., Mitzi, D., B., Kapitulnik, A., Harris Jr., J., S.
1990; 10 (B41): 7251-7253
- **Impact of Surface Layer on In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As/InP High Electron Mobility Transistors** *IEEE Electron Dev. Ltrrs*
Pao, Y., C., Nishimoto, C., Riazat, M., Majidi-Ahy, R., Bechtel, N., G., Harris Jr., J., S.
1990; 7 (11): 315-313
- **Characterization of Surface-Undoped In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As/InP High Electron Mobility Transistors** *IEEE Tran. Electron. Dev.*
Pao, Y., C., Nishimoto, C., K., Majidi-Ahy, R., Archer, J., Bechtel, N., G., Harris Jr., J., S.
1990; 10 (37): 2165-2170
- **In-Situ Growth of Single Crystal Bi₂Sr₂CaCu_{n+1}O_x Thin Films by Atomically Layered Epitaxy**

- Eckstein, J., N., Bozovic, I., Schlom, D., G., Chen, Z., J., Harris Jr., J., S.
1990
- **Defect Structures in MBE Grown GaAs on Si**
Kim, S., D., Ma, T., Rek, Z., Harris Jr., J., S.
1990
 - **Atomically Layered Heteroepitaxy of High Temperature Superconducting Thin Films: Metastable Phases and Superlattice Structures**
Eckstein, J., N., Bozovic, I., Dessonneck, K., E. von, Schlom, D., G., Harris Jr., J., S.
1990
 - **77K Photoluminescence Investigation of Residual Stress in MBE-Grown GaAs/Si Layers**
Adkisson, J., W., Harris, J., S., George, T., Weber, E., R.
1990
 - **Influence of Ballistic Electrons on the Device Characteristics of Vertically Integrated Resonant Tunneling Diodes** *Appl. Phys. Lett*
Harris, J., S., Rascol, J., J. L., Martin, K., P., Carnahan, R., E., Higgins, R., J., Cury, L.
1990; 14 (58): 1482-1484
 - **RESONANT TUNNELING OF 1-DIMENSIONAL ELECTRONS ACROSS AN ARRAY OF 3-Dimensionally Confined Potential Wells** *SUPERLATTICES AND MICROSTRUCTURES*
Allee, D. R., Chou, S. Y., Harris, J. S., Pease, R. F.
1990; 7 (2): 131-134
 - **Molecular Beam Epitaxy-a Path to Novel High Tc Superconductors**
Harris, J., S., Schlom, D., G., Eckstein, J., N., Bozovic, I., Chen, Z., J., Marshall, A., F.
1990
 - **Two Selective Etching Solutions for GaAs on InGaAs and GaAs/AlGaAs on InGaAs** *J. Electrochem. Soc.*
Hill, D., G., Lear, K., L., Harris Jr., J., S.
1990; 9 (137): 2913-2914
 - **Molecular Beam Epitaxial Growth of Layered Bi-Sr-Ca-Cu-O Compounds** *J. Cryst. Growth.*
Harris, J., S., Schlom, D., G., Marshall, A., F., Sizemore, J., T., Chen, Z., J., Eckstein, J., N.
1990: 361-375
 - **Quantum Wells and Artificially Structured Materials for Non-Linear Optics**
Harris Jr., J., S., Fejer, M., M.
1990
 - **Improved Design of AlAs/GaAs Resonant Tunneling Diodes**
Cheng, P., Harris Jr., J., S.
1990
 - **A new Direct Method for Determining the Heterojunction Bipolar Transistor Equivalent Circuit Model**
Costa, D., Liu, W., Harris Jr., J., S.
1990
 - **Optimization of Reflection Electro-Absorption Modulators**
Pezeshki, B., Thomas, D., Harris Jr., J., S.
1990
 - **In-Situ Growth of Superconducting Single Crystal Bi-Sr-Ca-Cu-O Thin Films by Molecular Beam Epitaxy**
Bozovic, I., Eckstein, J., N., Schlom, D., G., Harris Jr., J., S.
1990
 - **Growth of Metastable Phases and Superlattice Structures of Bi-Sr-Ca-Cu-O Compounds by an Atomic Layering MBE Technique**
Schlom, D., G., Marshall, A., F., Harris Jr., J., S., Bozovic, I., Eckstein, J., N.
1990

- **Comparison of Pnp AlGaAs/GaAs Heterojunction Bipolar Transistor with and Without Base Quasielectric Field**
Liu, W., Hill, D., Costa, D., Harris Jr., J., S.
1990
- **Ballistic Electron Contributions in Vertically Integrated Resonant Tunneling Diodes**
Harris, J., S., Rascol, J., L., Martin, K., P., Carnahan, R., E., Higgins, R., J., Cury, L.
1990
- **From Bloch Functions to Quantum Wells** *Conductivity and Magnetism, The Legacy of Felix Bloch*
Harris Jr., J., S.
edited by Little, William, A.
World Scientific, Singapore.1990: 23-53
- **Wannier-Stark Localization in a Strained InGaAs/GaAs Superlattice** *Appl. Phys. Lett.*
Pezeshki, B., Thomas, D., Harris Jr., J., S.
1990; 20 (57): 2116-2117
- **Uniform, High-Gain AlGaAs/In_{0.05}Ga_{0.95}As/GaAs P-n-p Heterojunction Bipolar Transistors by Dual Selective Etch Process** *IEEE Electron Device Lett.*
Hill, D., G., Lee, W., S., Ma, T., Harris Jr., J., S.
1990; 11: 425-427
- **Large Reflectivity Modulation Using InGaAs-GaAs** *IEEE Photon. Techn. Lett.*
Pezeshki, B., Thomas, D., Harris Jr., J., S.
1990; 2: 807-809
- **RESONANT TUNNELING DIODES FOR SWITCHING APPLICATIONS** *APPLIED PHYSICS LETTERS*
DIAMOND, S. K., Ozbay, E., Rodwell, M. J., Bloom, D. M., Pao, Y. C., Harris, J. S.
1989; 54 (2): 153-155
- **Effect of Emitter-Base Spacing on the Current Gain of AlGaAs/GaAs Heterojunction Bipolar Transistors** *IEEE Electron Device Letters*
Lee, W., S., Ueda, D., Ma, T., Pao, Y., C., Harris Jr., J., S.
1989: 200-202
- **The X-Valley Transport in GaAs/AlAs Triple Barrier Structures** *J. Appl. Phys.*
Cheng, P., Park, B., G., Kim, S., D., Harris Jr., J., S.
1989; 12 (65): 5199-5201
- **Influence of As₄/Ga Flux Ratio on Be Incorporation in Heavily Doped GaAs Grown by Molecular Beam Epitaxy** *J. Crystal Growth*
Pao, Y., C., Franklin, J., Harris Jr., J., S.
1989: 301-304
- **GaAs/AlGaAs Power HBT on Silicon Substrate** *Electron. Lett.*
Ueda, D., Lee, W., S., Ma, T., Costa, D., Harris Jr., J., S.
1989; 19 (25): 1968-1269
- **Resonant Tunneling Diodes for Switching Applications**
Harris, J., S., Diamond, S., K., Özbay, E., Rodwell, M., J. W., Bloom, D., M., Pao, Y., C.
1989
- **Variation of the Spacer Layer Between two Resonant Tunneling Diodes** *Appl. Phys. Lett.*
Wolak, E., Park, B., G., Lear, K., L., Harris Jr., J., S.
1989: 1871-1873
- **Molecular Beam Epitaxy AlGaAs/GaAs Grown in the Presence of Hydrogen** *J. Crystal Growth*
Pao, Y., C., Liu, D., Harris Jr., J., S.
1989: 305-308
- **MBE Growth of High Critical Temperature Superconductors** *J. Crystal Growth*
Harris Jr., J., S., Eckstein, J., N., Eckstein, J., N., Schlom, D., G.
1989: 607-616

- **Effect of Bulk Recombination Current on the Current Gain of GaAs/AlGaAs Heterojunction Bipolar Transistors in GaAs-on-Si** *IEEE Electron Dev. Lett.*
Ma, T., Lee, W., S., Adkisson, J., Harris Jr., J., S.
1989; 10 (10): 458-460
- **AlGaAs/InGaAs Strained-Base PnP Heterojunction Bipolar Transistors** *Electron. Lett.*
Hill, D., G., Lee, W., S., Ma, T., Harris Jr., J., S.
1989: 993-995
- **Monolithically Integrated Fiber-Optic Front-End Receiver in GaAs on Si Technology**
Nasserbakht, N., Adkisson, J., W., Kamins, T., I., Wooley, B., A., Harris Jr., J., S.
1989
- **Microwave Characteristics of MBE Grown Resonant Tunneling Devices**
Owens, J., M., Halchin, D., J., Lear, K., L., Lee, W., S., Harris Jr., J., S.
1989
- **Improved Vertically Integrated Resonant Tunneling Diodes**
Park, B., G., Wolak, E., Lear, K., L., Harris Jr., J., S.
1989
- **Photonics** *Brief Lessons in High Technology: Understanding the End of this Century to Capitalize on the Next*
Harris, J., S.
edited by Meindl, James, D.
Portable Stanford, Stanford, CA.1989: 31-61
- **Reduction of Gallium-Related Oval Defects** *J. Vac. Sci. & Technol.*
Schlom, D., G., Lee, W., S., Ma, T., Harris Jr., J., S.
1989; 2 (B7): 296-298
- **Many-Body Effects in the Luminescence Spectra of GaAs/AlGaAs Modulation Doped Heterostructures** *ACTA Physica Polonica*
Munnix, S., Bimberg, D., Mars, D., E., Miller, J., N., Larkins, E., C., Harris Jr., J., S.
1989: 33-37
- **Influence of the As:Ga Flux Ratio on Growth Rate, Interface Quality, and Impurity Incorporation in AlGaAs/GaAs Quantum Wells Grown by Molecular Beam Epitaxy** *Appl. Phys. Lett.*
Köhrbröck, R., Munnix, S., Bimberg, D., Larkins, E., C., Harris Jr., J., S.
1989; 7 (54): 623-625
- **Growth Kinetics, Impurity Incorporation, Defect Generation, and Interface Quality of MBE-grown AlGaAs/GaAs Quantum Wells: Role of group III and group V Fluxes** *J. Vac. Sci. Technol.*
Munnix, S., Bauer, R., K., Bimberg, D., Harris Jr., J., S., Köhrbrück, R., Larkins, E., C.
1989; 4 (B7): 704-709
- **Umklapp Electron-Electron Scattering Resistivity in YBa₂Cu₃O_{7-x}** *IEEE Elect. Dev. Lett.*
Harris, J., S., Hellman, E., S.
1989; 3 (10): 104-106
- **Observation of Extremely Large Quadratic Susceptibility at 9.6 - 10.8 μ m in Electric-field-biased AlGaAs Quantum Wells** *Phys. Rev. Lett.*
Fejer, M., M., Yoo, S., J. B., Byer, R., L., Harwit, A., Harris Jr., J., S.
1989; 1 (62): 1041-1044
- **Development of Molecular Beam Epitaxial Growth of High Temperature Superconducting Compounds**
Eckstein, J., N., Harris Jr., J., S., Schlom, D., G., Bozovic, I., von Dessoneck, K., E., Chen, Z., J.
1989
- **New Lateral Resonant Tunneling FETs Fabricated Using Molecular Beam Epitaxy and Ultra-High Resolution Electron Beam Lithography**
Chou, S., Y., Allee, D., R., Pease, R., F. W., Harris Jr., J., S.
1989
- **Molecular Beam Epitaxy of Layered Bi-Sr-Ca-Cu-O Compounds**

- Harris, J., S., Schlom, D., G., Eckstein, J., N., Bozovic, I., Marshall, A., F., Sizemore, J., T.
1989
- **The Effect of Si Doping in AlAs Barrier Layers of AlAs-GaAs-AlAs Double Barrier Resonant Tunneling Diodes** *Appl. Phys. Lett.*
Cheng, P., Harris Jr., J., S.
1989; 6 (55): 572-574
 - **Phase Characterization of Dysprosium Barium Copper Oxide Thin Films Grown on Strontium Titanate by Molecular Beam Epitaxy** *J. Mater. Res.*
Hellman, E., S., Schlom, D., G., Marshall, A., F., Streiffer, S., K., Harris Jr., J., S., Beasley, M., R.
1989; 3 (4): 476-495
 - **Fabrication of Resonant Tunneling Diodes for Integrated Circuit and Microwave Applications** *IEEE Electron Device Letters*
Harris, J., S., Diamond, S., K., Ozbay, E., Rodwell, M., J. W., Bloom, D., M., Pao, Y., C.
1989: 104-106
 - **Epitaxial Growth of High Temperature Superconducting Thin Films** *J. Vac. Sci. & Technol.*
Harris, J., S., Eckstein, J., N., Schlom, D., G., Hellman, E., S., Dessonneck, K., E. von, Chen, Z., J.
1989; 2 (B7): 319-323
 - **Elastic Scattering in Resonant Tunneling Devices With One Degree of Freedom** *J. of Superlattices and Microstructures*
Wolak, E., Shepard, K., Chou, S., Y., Harris Jr., J., S.
1989; 2 (5): 251-253
 - **PROCESSING AND CHARACTERIZATION OF GAAS GROWN INTO RECESSED SILICON** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*
ADKISSON, J. W., Kamins, T. I., Koch, S. M., Harris, J. S., Rosner, S. J., Reid, G. A., Nauka, K.
1988; 6 (2): 717-719
 - **RESONANT TUNNELING OF ELECTRONS OF ONE OR 2-DEGREES OF FREEDOM** *APPLIED PHYSICS LETTERS*
Chou, S. Y., Wolak, E., Harris, J. S.
1988; 52 (8): 657-659
 - **A LATERAL RESONANT TUNNELING FET** *SUPERLATTICES AND MICROSTRUCTURES*
Chou, S. Y., Wolak, E., Harris, J. S., Pease, R. F.
1988; 4 (2): 181-186
 - **Limit Cycle Oscillations in Negative Differential Resistance Devices** *J. Appl. Phys.*
Hellman, E., S., Lear, K., L., Harris Jr., J., S.
1988; 5 (64): 2798-2800
 - **Elastic Scattering Centers in Resonant Tunneling Diodes** *Appl. Phys. Lett.*
Harris, J., S., Wolak, E., Lear, K., L., Pitner, P., M., Hellman, E., S., Park, G., B.
1988; 3 (53): 201-203
 - **Effect of Strain on the Band Structure of GaAs and In_{0.2}Ga_{0.8}As** *Appl. Phys. Lett.*
Harris, J., S., Hwang, J., Shih, C., K., Pianetta, P., Kubiak, G., D., Stulen, R., H.
1988; 4 (52): 308-310
 - **A Lateral Resonant Tunneling Field-Effect Transistor** *Appl. Phys. Lett.*
Chou, S., Y., Harris Jr., J., S., Pease, R., F. W.
1988; 23 (52): 1982-1984
 - **Flux Ratio Dependence of Growth Rate, Interface Quality, and Impurity Incorporation in MBE Grown AlGaAs/GaAs Quantum Wells**
Köhrbrück, R., Munnix, S., Bimberg, D., Larkins, E., C., Harris Jr., J., S.
1988
 - **Molecular Beam Epitaxy and Deposition of High Tc Superconductors** *J. Vac. Sci. Technol. B*
Hellman, E., S., Schlom, D., G., Missert, N., Char, K., Harris Jr., J., S., Beasley, M., R.
1988; 2 (6): 799-803
 - **(110)-Oriented GaAs MESFETs** *IEEE Elect. Dev. Lett.*
Pao, Y., C., Ou, W., Harris Jr., J., S.

1988; 3 (9): 119 - 123

- **Sodium Sulfide Treated (100) and Misoriented (110) GaAs Surfaces**
Harris, J., S., Liu, D., Larkins, E., C., Zhang, T., Chiang, T., T., LaRue, R., A.
1988
- **The Effect of Elastic Scattering Centers on the Current Voltage Characteristics of Double Barrier Resonant Tunneling Diodes**
Harris, J., S., Wolak, E., Lear, K., L., Pitner, P., M., Park, G., B., Hellman, E., S.
1988
- **Heteronucleation Onto Si Surfaces**
Harris, J., S., Hull, R., Bean, J., C., Chand, N., Leibenguth, R., E., Bahnck, D.
1988
- **Growth of GaAs on Si in Masked, Etched Trenches**
Adkisson, J., W., Kamins, T., I., Koch, S., M., Harris Jr., J., S., Rosner, S., J., Nauka, K.
edited by Choi, H., K., Hull, R., Ishiwars, H.
1988
- **Influence of Buffer Layer Thickness on DC Performance of GaAs/AlGaAs Heterojunction Bipolar Transistors Grown on Silicon Substrates** *IEEE Electron Device Lett.*
Ma, T., Ueda, D., Lee, W. S., Adkisson, J., Harris Jr., J., S.
1988; 12 (9): 657-659
- **Hot Electron Transport Parallel to Strong Magnetic Fields in Gallium Arsenide** *Solid State Electronics*
Hellman, E., S., Harris Jr., J., S.
1988; 31 (3/4): 785-788
- **Electron Saturation Velocity Variation in InGaAs and GaAs Channel MODFETs for Gate Lengths to 550 Å** *IEEE Electron Device Lett.*
de la Houssaye, P., R., Allee, D., R., Pao, Y., C., Schlom, D., G., Harris Jr., J., S., Pease, R., F. W.
1988; 3 (9): 148-150
- **Monolithic Integration of GaAs/AlAs Resonant Tunnel Diode Load and GaAs Enhancement-Mode MESFET Drivers for Tunnel Diode FET Logic Gates**
Lear, K., L., Yoh, K., Harris Jr., J., S.
1988
- **High Carrier Densities in GaAs/AlGaAs Modulation n-Doped Quantum Wells: From One- to Two-Component Plasma**
Munnix, S., Bimberg, D., Mars, D., E., Miller, J., N., Larkins, E., C., Harris Jr., J., S.
1988
- **Summary Abstract: MBE Growth of Tunable Multi-Layer Interference Optical Modulators** *J. Vac. Sci. Technol. B.*
Yoffe, W., Schlom, D., G., Harris Jr., J., S.
1988; 2 (6): 688
- **Molecular Beam Epitaxy of Layered Dy-Ba-Cu-O Compounds** *Appl. Phys. Lett.*
Schlom, D., G., Eckstein, J., N., Hellman, E., S., Streiffer, S., K., Harris Jr., J., S., Beasley, M., R.
1988; 17 (53): 1660-1662
- **Substrate Surface Structure and Nucleation Phenomena in Epitaxial Growth of GaAs on Vicinal Si (100) Substrates**
Hull, R., Koch, S., M., Harris Jr., J., S.
1988
- **Sub-100 nm Gate Length GaAs MESFETs and MODFETs Fabricated by a Combination of Molecular Beam Epitaxy and Electron Beam Lithography**
Allee, R., Houssaye, P., R. de la, Schlom, D., G., Harris Jr., J., S., Pease, R., F. W.
1988
- **Room-Temperature Observation of Resonant Tunneling Through a AlGaAs/GaAs Quasi-Parabolic Quantum Well Grown by MBE** *Appl. Phys. Lett.*
Chou, S., Y., Harris Jr., J., S.
1988; 17 (52): 1422-1424

- **Sulfur Incorporation in Undoped High Purity n-Type GaAs Grown by Molecular Beam Epitaxy**
Harris, J., S., Lee, B., Kim, M., H., Bose, S., S., Stillman, G., E., Larkins, E., C.
1988
- **Spatial Inhomogeneities of the Luminescence and Electrical Properties of MBE Grown GaAs on Si**
Reid, A., Nauka, K., Rosner, S., J., Koch, S., M., Harris Jr., J., S.
1988
- **Picosecond Pulsing and Sampling by GaAs Photodetectors Fabricated on Silicon Substrates**
Harris, J., S., Morse, J., D., Pocha, M., D., Dutton, R., W., Anderson, G., D., Adkisson, J., W.
1988
- **Molecular Beam Epitaxy of Layered DY-BA-CU-O Compounds**
Schlom, D., G., Eckstein, J., N., Hellman, E., S., Webb, C., Turner, F., Harris Jr., J., S.
1988
- **GaAs/Si Nucleation and Buffer Layer Growth**
Koch, S., M., Hull, R., Rosner, S., J., Harris Jr., J., S.
1988
- **Characterization of AlGaAs and GaAs Materials and Interfaces Grown on Misoriented (110) GaAs by MBE**
Larkins, E., C., Liu, D., Pao, Y., C., Lin, M., J., Yoffe, G., W., Harris Jr., J., S.
1988
- **Summary Abstract: Growth of GaAs and AlGaAs on misoriented (110) GaAs by Molecular Beam Epitaxy** *J. Vac. Sci. Technol. B*
Larkins, E., C., Pao, Y., C., Liu, D., Lin, J., Yoffe, G., Harris Jr., J., S.
1988; 2 (6): 636-637
- **Deep Level Transient Spectroscopy Study of GaAs Surface States Treated With Inorganic Sulfides** *Appl. Phys. Lett.*
Liu, D., Zhang, T., LaRue, R., A., Harris Jr., J., S., Sigmon, T., W.
1988; 12 (53): 1059-1061
- **Characterization of Al_{0.25}Ga_{0.75}As Grown by Molecular Beam Epitaxy** *J. Vac. Sci. Technol. B*
Harris, J., S., Lin, M., J., Larkins, E., C., Pao, Y., C., Liub, D., Yoffe, G.
1988; 2 (6): 631-635
- **OBSERVATION OF STARK SHIFTS IN QUANTUM-WELL INTERSUBBAND TRANSITIONS** *APPLIED PHYSICS LETTERS*
Harwit, A., Harris, J. S.
1987; 50 (11): 685-687
- **INFRARED TRANSMISSION SPECTROSCOPY OF GAAS DURING MOLECULAR-BEAM EPITAXY** *JOURNAL OF CRYSTAL GROWTH*
Hellman, E. S., Harris, J. S.
1987; 81 (1-4): 38-42
- **THE GROWTH OF GAAS ON SI BY MBE** *JOURNAL OF CRYSTAL GROWTH*
Koch, S. M., Rosner, S. J., Hull, R., Yoffe, G. W., Harris, J. S.
1987; 81 (1-4): 205-213
- **POLYNOMIAL KINETIC-ENERGY APPROXIMATION FOR DIRECT-INDIRECT HETEROSTRUCTURES** *SUPERLATTICES AND MICROSTRUCTURES*
Hellman, E. S., Harris, J. S.
1987; 3 (2): 167-169
- **Complementary MODFET Circuits Consisting of Pseudomorphic N-MODFET and Double Heterojunction P-MODFET** *by MBE, IEDM Washington, DC*
Yoh, K., Harris Jr., J., S.
1987: 892
- **Modulation of Light by Electrically Tunable Multi-Layer Interference Filter** *Appl. Phys. Lett.*
Yoffe, G., W., Schlom, D., G., Harris Jr., J., S.
1987; 23 (51): 1876-1878

- **Determination of the Natural Valence-Band Offset in InxGa1-xAs System** *Appl. Phys. Lett.*
Hwang, J., Pianetta, P., Shih, C., K., Spicer, W., E., Pao, Y., C., Harris Jr., J., S.
1987; 20 (51): 1632 - 1634
- **The Nucleation and Growth of GaAs on Si**
Harris Jr., J., S., Koch, S., M., Rosner, S., J.
1987
- **Nucleation of GaAs on Vicinal Si(100) Surfaces**
Hull, R., Fischer-Colbrie, A., Koch, S., M., Harris Jr., J., S.
1987
- **Relationship Between Substrate Cleaning, Surface Structure and Nucleation Phenomena in Heteroepitaxial Growth on Si** *extended Abstracts of Electrochemical, Materials Research Society Meeting, Honolulu, Hawaii*
Hull, R., Bean, J., C., Leibenguth, R., Koch, S., M., Harris Jr., J., S.
1987
- **Device and material characterization of molecular-beam epitaxial (110) GaAs/AlGaAs** *J. Electron. Mat.*
Pao, Y., C., Gabrial, N., Liu, D., Harris Jr., J., S., Parechianian, L., Webber, E., R.
1987; 4 (16): A16
- **A p-Channel Strained Quantum Well Modulation Doped Field Effect Transistor** *Extended Abstracts of the Japan Society of Applied Physics Meeting, Tokyo*
Yoh, K., Harris Jr., J., S.
1987; 804.83
- **Sub-100 nm Gate Length GaAs MESFETs Fabricated by Molecular Beam Epitaxy and Electron Beam Lithography**
Allee, D., R., Houssaye, P., R. de la, Schlom, D., G., Langley, B., W., Harris Jr., J., S., Pease, R., F. W.
1987
- **Deep Electron Traps in MBE GaAs on Si**
Nauka, K., Reid, G., A., Rosner, S., J., Koch, S., M., Harris Jr., J., S.
1987
- **Growth of High Tc Superconducting Thin Films using Molecular Beam Epitaxy Techniques** *Appl. Phys. Lett.*
Harris, J., S., Webb, C., Weng, S., L., Eckstein, J., N., Missert, N., Char, K.
1987; 15 (51): 1191
- **Comment on Observation of a Negative Differential Resistance due to Tunneling through a Single Barrier into a Quantum Well** *Appl. Phys. Lett.*
Wolak, E., Harwit, A., Harris Jr., J., S.
1987; 22 (50)
- **The Influence of Substrates on Implanted Layer Characteristics**
Johannessen, J., S., Harris Jr., J., S., Rensch, D., B., Winston, H., V., Hunter, A., T., Kocot, C.
1987
- **Structural Characterization of Thin, Low Temperature Films of GaAs on Si Substrates**
Rosner, S., J., Koch, S., M., Harris Jr., J., S.
1987
- **Infra-Red Transmission Spectroscopy of GaAs during Molecular Beam Epitaxy** *J. Cryst. Growth*
Hellman, E., S., Harris Jr., J., S.
1987; 81: 38-42
- **GaAs with Very Low Acceptor Impurity Background Grown by Molecular Beam Epitaxy** *J. Cryst. Growth*
Larkins, E., C., Hellman, E., S., Schlom, D., G., Harris Jr., J., S., Kim, M., H., Stillman, G., E.
1987; 81: 344-348
- **POLARON TRANSPORT IN QUASI-ONE-DIMENSIONAL SEMICONDUCTOR HETEROSTRUCTURES** *SURFACE SCIENCE*
Hellman, E. S., Harris, J. S.
1986; 174 (1-3): 459-465

- **ENERGY-MOMENTUM RELATION FOR POLARONS CONFINED TO ONE DIMENSION** *PHYSICAL REVIEW B*
Hellman, E. S., Harris, J. S.
1986; 33 (12): 8284-8290
- **Calculated Quasi-Eigenstates and Quasi-Eigenenergies of Quantum Well Superlattices in an Applied Field** *J. Appl. Phys.*
Harwit, A., Harris Jr., J., S., Kapitulnik, A.
1986; 9 (60): 3211-13
- **Microstructure of Thin Layers of MBE-Grown GaAs on Si Substrates**
Rosner, S., J., Koch, S., M., Laderman, S., Harris Jr., J., S.
edited by Fan, J., C. C., Poate, J., M.
1986
- **Stanford University: Stanford Electronics Laboratory and Microwave Ginzton Laboratory** *Forthieth Anniversary of the Joint Services Electronics Program*
Harris, S., E., Harris Jr., J., S.
edited by Shostak, A.
ANSER, Arlington, VA. 1986
- **Surface Effect-Induced Fast Be Diffusion in Heavily Doped GaAs Grown by Molecular Beam Epitaxy** *J. Appl. Phys.*
Harris, J., S., Pao, Y., C., Hierl, T., Cooper, T.
1986; 1 (60): 201-204
- **Reduction of the Acceptor Impurity Background in GaAs Grown by Molecular Beam Epitaxy** *Appl. Phys. Lett.*
Larkins, E., C., Hellman, E., S., Schlom, D., G., Harris Jr., J., S., Kim, M., H., Stillman, G., E.
1986; 7 (49): 391-3
- **Mechanism of Current Modulation by Optic Phonons in Heterojunction Tunneling Experiments** *Phys. Rev. B*
Harris, J., S., Hanna, C., B., Hellman, E., S., Laughlin, R., B.
1986; 8 (34): 5475-83
- **Atomic Structure of the GaAs/Si Interface** *Appl. Phys. Lett.*
Hull, R., Rosner, S., J., Koch, S., M., Harris Jr., J., S.
1986; 25 (49): 1714-16
- **Material Effects on the Cracking Efficiency of Molecular Beam Epitaxy Arsenic Cracking Furnaces** *J. Vac. Sci. Technol.*
Lee, R., L., Schaffer, W., J., Chai, Y., G., Liu, D., Harris Jr., J., S.
1986; 2 (B4): 568-70
- **Effect of Hydrogen on Undoped and Lightly Si-Doped Molecular Beam Epitaxial GaAs Layers** *Appl. Phys. Lett.*
Pao, Y., C., Liu, D., Lee, W., S., Harris Jr., J., S.
1986; 19 (48): 1291-3
- **Nucleation and Initial Growth of GaAs on Si Substrate** *Appl. Phys. Lett.*
Rosner, S., J., Koch, S., M., Harris Jr., J., S.
1986; 26 (49): 1764-66
- **Molecular Beam Epitaxy of Gallium Arsenide using Direct Radiative Substrate Heating** *J. Vac. Sci. Technol.*
Hellman, E., S., Pitner, P., M., Harwit, A., Liu, D., Yoffe, G., W., Harris Jr., J., S.
1986; 2 (B4): 574-7
- **The Growth of GaAs on Si by Molecular Beam Epitaxy**
Koch, S., M., Rosner, S., J., Schlom, D., G., Harris Jr., J., S.
edited by Fan, J., C. C., Poate, J., M.
1986
- **One Dimensional Polaron Effects and Current Inhomogeneities in Sequential Phonon Emission** *Physica*
Hellman, E., S., Harris Jr., J., S., Hanna, C., B., Laughlin, R., B.
1985; 134B: 41-46

- **Heterojunction Bipolar Transistors** *J. J. Appl. Phys*
Harris Jr., J., S., Miller, D., L., Asbeck, P., M.
1982; 22: 379
- **GaAs/AlGaAs Tunnel Junctions for Multiple Bandgap Solar Cells** *J. Appl. Phys.*
Miller, D., L., Zehr, S., W., Harris Jr., J., S.
1982; 53: 744
- **Heterojunction Bipolar Transistors**
Harris Jr., J., S., Miller, D., L., Asbeck, P., M.
1982
- **An MBE AlGaAs/GaAs Heterojunction Bipolar Transistor**
Miller, D., L., Harris Jr., J., S., Asbeck, P., M.
edited by Sugano, T.
1981
- **(Ga,Al)As/GaAs Bipolar Transistors for Digital Integrated Circuits**
Asbeck, P., M., Miller, D., L., Milano, R., A., Harris Jr., J., S., Kaelin, G., R., Zucca, R.
1981
- **High Performance AlGaAs/GaAs Heterojunction CCDs for Imaging Applications** *Adv. Astronomical Sciences*
Harris Jr., J., S., Reitz, L., R.
1981; 45: 197
- **High Performance AlGaAs/GaAs Heterojunction CCDs for Imaging Applications**
Harris Jr., J., S., Reitz, L., R.
1981
- **Measurement of Isotype Heterojunction Barriers by C-V Profiling** *Appl. Phys. Lett.*
Kroemer, H., Chien, W., Yi, Harris Jr., J., S., Edwall, D., D.
1980; 36: 295
- **Low Bandgap (0.7 to 1.1 eV) Solar Cells in the GaAlAsSb/GaSb System**
Liu, Y., Z., Yang, H., T., Harris Jr., J., S.
1980
- **MBE GaAs Heteroface Solar Cells Grown on Ge** *Appl. Phys. Lett.*
Miller, D., L., Harris Jr., J., S.
1980; 37: 1104
- **A Backside-Illuminated Imaging AlGaAs/GaAs Charge Coupled Device** *Appl. Phys. Lett.*
Liu, Y., Z., Deyhimy, I., Anderson, R., J., Milano, R., A., Cohen, M., J., Harris Jr., J., S.
1980; 37: 803
- **Solar Cell Characterization at Rockwell International**
Cohen, M., J., Cape, J., A., Paul, M., D., Miller, D., L., Harris Jr., J., S.
1980
- **Gallium Arsenide Photovoltaic Dense Array for Concentrator Applications**
Cape, J., A., Harris Jr., J., S., Wiczer, J.
1980
- **A Non-Lattice Matched Monolithic Multicolor Solar Cell**
Harris, J., S., Zehr, S., W., Yang, H., T., Yang, J., J., Coleman, J., J., Miller, D., L.
1980
- **Schottky Barrier Formation in Polycrystal GaAs** *J. Vac. Sci. Technol.*
Cohen, M., J., Paul, M., D., Miller, D., L., Waldrop, J., R., Harris Jr., J., S.
1980; 17: 899

- **GaAs and Related Heterojunction Charge Coupled Devices** *IEEE Trans. Electron Dev.*
Deyhimy, I., Eden, R., C., Harris Jr., J., S.
1980; ED-27: 1172
- **Barrier Height Enhancement in Heterojunction Schottky Barrier Solar Cells** *IEEE Trans. Electron Dev*
Yang, H., T., Shen, Y., D., Edwall, D., D., Miller, D., L., Harris Jr., J., S.
1980; ED-27: 851
- **Monolithic Multicolor Solar Conversion**
Harris, J., S., Zehr, S., W., Yang, H., T., Coleman, J., J., Miller, D., L., Yang, J., J. J.
1980
- **Gallium Arsenide Photovoltaic Dense Array for Concentrator Applications**
Wiczner, J., J., Cape, J., A., Harris Jr., J., S.
1980
- **Heterojunction Schottky Barrier Solar Cells**
Yang, H., T., Miller, D., L., Shen, Y., D., Edwall, D., D., Harris Jr., J., S.
1980
- **Observation of Charge Storage and Charge Transfer in a GaAlAsSb/GaSb CCD** *Appl. Phys. Lett*
Liu, Y., Z., Deyhimy, I., Harris Jr., J., S., Anderson, R., J., Appelbaum, J.
1980; 36: 458
- **A 500 MHz GaAs Charge Coupled Device** *Appl. Phys. Lett.*
Deyhimy, I., Eden, R., C., Edwall, D., D., Anderson, R., J., Harris Jr., J., S.
1980; 36: 151
- **Performance Losses in High Efficiency Monolithic Multijunction Solar Cells**
Zehr, S., W., Cape, J., A., Harris Jr., J., S.
1980
- **Charge Coupled Devices in Gallium Arsenide**
Deyhimy, I., Anderson, R., J., Eden, R., C., Harris Jr., J., S.
1980
- **Analog Signal Processing Complement to GaAs Digital ICs**
Deyhimy, I., Harris Jr., J., S., Eden, R., C., Anderson, R., J.
1979
- **Reduced Geometry GaAs CCD for High Speed Signal Processing** *J. J. Appl. Phys*
Deyhimy, I., Harris Jr., J., S., Eden, R., C., Anderson, R., J.
1979; 19: 269
- **Minimum Al_{0.5}Ga_{0.5}As-GaAs Heterojunction Width Determined by Sputter-Auger Technique** *Appl. Phys. Lett*
Garner, C., M., Su, C., Y., Spicer, W., E., Edwood, P., D., Miller, D., Harris, J., S.
1979; 34: 610
- **High Efficiency AlGaAs/GaAs Concentrator Solar Cells** *Appl. Phys. Lett.*
Sahai, R., Edwall, D., D., Harris, J., S.
1979; 34: 147
- **Reduced Geometry GaAs CCD for High Speed Signal Processing**
Deyhimy, I., Harris Jr., J., S., Eden, R., C., Anderson, R., J.
1979
- **Intercell Ohmic Contacts for High Efficiency Multijunction Solar Converters**
Stanley, W., Zehr, Miller, D., L., Harris Jr., J., S.
1979

● **20 KW Gallium Arsenide Photovoltaic Dense Array for Central Receiver Concentrator Applications**

Cape, J., A., Sahai, R., Harris, J., S.
1979

● **Application of GaAs CCD's to High Speed Signal Processing**

Deyhimy, I., Harris Jr., J., S., Eden, R., C.
1979

● **An Ultra High Speed GaAs CCD**

Deyhimy, I., Harris Jr., J., S., Eden, R., C., Anderson, R., J., Edwall, D., D.
1979

● **259 Gate GaAs CCD Shift Register for High Speed Applications**

Deyhimy, I., Harris Jr., J., S., Eden, R., C., Anderson, R., J.
1979

● **Interface Studies of Al Gal As-GaAs Heterojunctions** *J. Appl. Phys.*

Harris, J., S., Garner, C., M., Su, C., Y., Shen, Y., D., Lee, C., S., Pearson, G., L.
1979; 50: 3383

● **GaAlAs/GaAs Heterojunction Schottky Barrier Gate CCD**

Liu, Y., Z., Deyhimy, I., Anderson, R., J., Harris Jr., J., S., Tomasetta, L., R.
1979

● **Development of Stacked Multiple Bandgap Solar Cells**

Harris, J., S., Ruth, R., P., Zehr, S., W., Coleman, J., J., Dupuis, R., D., Yang, H., T.
1979

● **CCD's in GaAs and Related III-V Compounds**

Deyhimy, I., Harris, J., S., Edwall, D., D.
edited by Wolfe, C., M.
1978

● **Ionization Coefficients of Ga_{0.72}Al_{0.28}Sb Avalanche Photodetectors** *Appl. Phys. Lett*

Law, H., D., Nakano, K., Tomasetta, L., R., Harris, J., S.
1978; 33: 948

● **1.0-1.4 μ m High-Speed Avalanche Photodiodes** *Appl. Phys. Lett*

Law, H., D., Tomasetta, L., R., Nakano, K., Harris, J., S.
1978; 33: 416

● **High Efficiency AlGaAs/GaAs Concentrator Solar Cell Development**

Sahai, R., Edwall, D., D., Harris, J., S.
1978

● **Carrier Transport at Grain Boundaries in Polycrystalline GaAs**

Cohen, M., J., Harris, J., S., Waldrop, J., R.
1978

● **GaAs Charge Coupled Devices** *Appl. Phys. Lett*

Deyhimy, I., Harris, J., S., Eden, R., C., Edwall, D., D., Anderson, S., J., Bubulac, L., O.
1978; 32: 383

● **High Speed GaAs CCD**

Deyhimy, I., Harris, J., S., Eden, R., C., Edwall, D., D., Anderson, R., J.
1978

● **(SN)_x-GaAs Polymer Semiconductor Solar Cells** *Appl. Phys. Lett*

Cohen, M., J., Harris, J., S.
1978; 33: 812

- **GaAs CCD with High Transfer Efficiency**
Deyhimy, I., Harris, J., S., Eden, R., C.
1978
- **Spectrally Split Tandem Cell Converter Studies**
Cape, J., A., Harris, J., S., Sahai, R.
1978
- **GaAlAsSb/ GaSb Alloys: Material Preparation and Applications to Optoelectronic Devices**
Law, H., D., Harris, J., S., Wong, K., C., Tomasetta, L., R.
edited by Wolfe, C., M.
1978
- **A Solar Power System with Gallium Arsenide Solar Cells**
Madewell, J., F., Nussberger, A., A., Harris, J., S.
1977
- **Growth and Evaluation of LPE Graded Composition Al Ga As Layers for High Efficiency Graded Bandgap Solar Cells** *J. Electronic Materials*
Sahai, R., Harris, J., S., Edwall, D., D., Eisen, F., H.
1977; 6: 645
- **Gallium Arsenide Concentrator System**
Miller, R., S., Harris, J., S.
1977
- **Auger Profiling of 'Abrupt' LPE Al Ga 1-xAs/GaAs Heterojunctions** *J. Appl. Phys*
Garner, C., M., Shen, Y., D., Kim, J., S., Pearson, G., L., Spicer, W., E., Harris, J., S.
1977; 48: 3147
- **Auger Depth Profiling of Au-AlxGa1-xAs Interfaces and LPE AlxGa1-x-GaAs Heterojunctions** *J. Vac. Sci. Technol*
Garner, C., M., Shen, Y., D., Kim, J., S., Pearson, G., L., Spicer, W., E., Harris, J., S.
1977; 14: 985
- **AlGaSb Alloys for 1.0 μ m to 1.8 μ m Heterojunction Devices**
Anderson, S., H., Scholl, F., Harris, J., S.
edited by Eastman, L., F.
1977
- **High Efficiency Thin Window Ga1-xAlx As/GaAs Solar Cells**
Sahai, R., Edwall, D., D., Cory, E., Harris, J., S.
1976
- **Non-destructive Determination of Energy Gap Grading in Thin Films by Optical Transmission Measurements** *J. Vac. Sci. Technol*
Hall, W., F., Tennant, W., E., Cape, J., A., Harris, J., S.
1975; 13: 914
- **The Phase Diagram and its Application to the Liquid Phase Epitaxial Growth of Pb1-xSnxTe** *J. of Crystal Growth*
Harris, J., S., Longo, J., T., Gertner, E., R., Clarke, J., E.
1975; 28: 334
- **Potential Profiling Across Semiconductor Junctions by Auger Electron Spectroscopy in the Scanning Electron Microscope** *J. Appl. Phys*
Waldrop, J., R., Harris, J., S.
1975; 46: 5214
- **Double Heterojunction Photocathode Devices** *CRC Crit. Rev. Sol. State Sci*
Sahai, R., Harris, J., S., Eden, R., C., Bubulac, L., O., Chu, J., C.
1975; 5: 565
- **High Efficiency Graded Bandgap n/p AlxGa1-xAs Solar Cells**
Hutchby, J., A., Sahai, R., Harris, J., S.

1975

● **The Influence of Radiation Damage on Ion Implantation**

Harris, J., S., Eisen, F., H.

1974

● **Properties of Tellurium Implanted Gallium Arsenide** *Ion Implantation in Semiconductors and Other Materials*

Eisen, F., H., Harris, J., S., Welch, B., Pashley, R., D., Sigurd, D., Mayer, J., W.

edited by Crowder, B., L.

Plenum, New York.1973: 631

● **Material Properties of Solution Grown Pb_{1-x}Sn_xTe** *J. Nonmetals*

Longo, J., T., Gertner, E., R., Harris, J., S.

1973; 1: 321

● **Properties of Tellurium Implanted GaAs**

Eisen, F., H., Harris, J., S., Welch, B., Pashley, R., D., Sigurd, D., Mayer, J., W.

1972

● **Fluorine Ion Implantation Profiles in Gallium Arsenide as Determined by Auger Electron Spectroscopy** *Appl. Phys. Lett*

Harris, J., S., Harris, J., M., Marcus, H., L.

1972; 21: 598

● **Influence of Implantation Temperature and Surface Protection on Tellurium Implantation in GaAs** *Appl. Phys. Lett*

Harris, J., S., Eisen, F., H., Welch, B., Haskell, J., D., Pashley, R., D., Mayer, J., W.

1972; 21: 601

● **Material Properties of Solution Grown Pb_{1-x}Sn_xTe**

Longo, J., T., Gertner, E., R., Harris, J., S.

1972

● **Improved Surface Properties of Solution Grown GaAs and Pb_{1-x}Sn_xTe Epitaxial Layers: A New Technique** *J. Crystal Growth*

Longo, J., T., Harris, J., S., Gertner, E., R., Chu, J., C.

1972; 15: 107

● **The Effects of Dose Rate and Implantation Temperature on Lattice Damage and Electrical Activity in Ion Implanted GaAs**

Harris, J., S.

edited by I., J.

1971

● **The Effects of Uniaxial Stress on the Electrical Resistivity and the Gunn Effect in n-Type GaAs** *Phys. Rev.B*

Harris, J., S., Moll, J., L., Pearson, G., L.

1970; 1: 1660

● **The Annealing of Damage in Ion Implanted Gallium Arsenide** *Radiation Effects*

Harris, J., S., Eisen, F.

1970; 7: 123

● **Homogeneous Solution Grown Epitaxial GaAs by Tin Doping** *Solid State Electron*

Harris, J., S., Snyder, W., L.

1969; 12: 337

● **Ohmic Contacts to Solution Grown Gallium Arsenide** *J. Appl. Phys*

Harris, J., S., Nannichi, Y., Pearson, G., L.

1969; 40: 4575

● **The Effects of Uniaxial Stress on the Electrical Resistivity of n-Type Boat Grown and Liquid Epitaxial GaAs** *IEEE Trans. Elect Dev*

Harris, J., S., Snyder, W., L., Moll, J., L., Pearson, G., L.

1968; ED-14: 690