Stanford

David Miller

W.M. Keck Foundation Professor of Electrical Engineering, Emeritus

Curriculum Vitae available Online Resume available Online

Bio

BIO

David Miller (B. Sc., St. Andrews, Ph.D., Heriot-Watt) is the W. M. Keck Professor of Electrical Engineering Emeritus, and Professor by Courtesy of Applied Physics at Stanford University. Before Stanford, he was with Bell Laboratories from 1981 to 1996, as a department head from 1987. His research has covered semiconductor optics and optoelectronics, especially the discovery of the quantum-confined Stark effect in quantum wells and its application to optical modulators and switches; optics in digital systems, in particular his contributions to and analysis of the benefits of optical interconnects; nanophotonic structures and devices; fundamentals of optics and waves, including especially the concept of communication modes and its applications; and complex and controllable photonic circuits, including invention of universal architectures and of algorithms for their automatic configuration. He has published over 300 scientific papers, holds over 75 patents, has a Google h-index of over 110, is the author of the textbooks Quantum Mechanics for Scientists and Engineers (Cambridge, 2008) and Modern Physics for Engineers and Scientists (Miller Science, KDP, 2025), and has taught open online quantum mechanics classes to over 80,000 students. He was President of the IEEE LEOS (now Photonics Society) in 1995, and has served on boards for various societies, companies, and university and government bodies. He was awarded the Optica Adolph Lomb Medal, R. W. Wood Prize and Frederic Ives Medal/Jarus W Quinn Prize, the ICO International Prize in Optics, the IEEE Third Millennium Medal, and the 2013 Carnegie Millennium Professorship. He is also a Fellow of AAAS, APS, IEEE, Optica, the Electromagnetics Academy, the Royal Society of London and the Royal Society of Edinburgh, holds two Honorary Doctorates, and is a Member of the US National Academies of Sciences and of Engineering.

ACADEMIC APPOINTMENTS

- Professor Emeritus, Electrical Engineering

HONORS AND AWARDS

- Adolph Lomb Medal, OSA (1986)
- Fellow, OSA (1988)
- Fellow, APS (1988)
- R. W. Wood prize, OSA (1988)
- International Prize in Optics, International Commission for Optics (1991)
- Fellow, Royal Society (1995)
- Fellow, IEEE (1995)
- Honorary Degree, Vrije Universiteit Brussel (1997)
- Third Millennium Medal, IEEE (2000)
- Fellow, Royal Society of Edinburgh (2002)

- Honorary Degree, Heriot-Watt University (2003)
- Member, National Academy of Sciences (2008)
- Member, National Academy of Engineering (2010)
- Carnegie Millennium Professorship, Carnegie (2013)
- Fellow, Electromagnetics Academy (2014)
- Fellow, AAAS (2024)
- Frederic Ives Medal/Jarus W. Quinn Prize, Optica (2025)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, National Academy of Sciences (2008 - present)
- Member, National Academy of Engineering (2010 - present)

PROFESSIONAL EDUCATION

- BSc, St. Andrews University , Physics (1976)
- PhD, Heriot-Watt University , Physics (1979)

LINKS

- My professional web page: https://dabm.stanford.edu/
- My Google Scholar page: https://scholar.google.com/citations?hl=en&user=mF_qs5sAAAAJ&view_op=list_works&sortby=pubdate

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

David Miller's research interests include the use of optics in switching, interconnection, communications, computing, and sensing systems, physics and applications of quantum well optics and optoelectronics, and fundamental features and limits for optics and nanophotonics in communications and information processing.

Teaching

COURSES

2023-24

- Applied Quantum Mechanics II: EE 223 (Win)

2022-23

- Applied Quantum Mechanics I: EE 222, MATSCI 201 (Aut)
- Applied Quantum Mechanics II: EE 223 (Win)

Publications

PUBLICATIONS

- **Universal programmable and self-configuring optical filter** *OPTICA*
  Miller, D. A. B., Roques-carmes, C., Valdez, C. G., Kroo, A. R., Vlk, M., Fan, S., Solgaard, O.
  2025; 12 (9): 1417-1426
- **Tunnelling escape of waves** *NATURE PHOTONICS*
  Miller, D. A. B., Kuang, Z., Miller, O. D.
  2024

- **Measuring, processing, and generating partially coherent light with self-configuring optics.** *Light, science & applications*
  Roques-Carmes, C., Fan, S., Miller, D. A.
  2024; 13 (1): 260
- **Determining the optimal communication channels of arbitrary optical systems using integrated photonic processors** *NATURE PHOTONICS*
  Seyedinnavadeh, S., Milanizadeh, M., Zanetto, F., Ferrari, G., Sampietro, M., Sorel, M., Miller, D. A. B., Melloni, A., Morichetti, F.
  2023
- **Why optics needs thickness.** *Science (New York, N.Y.)*
  Miller, D. A.
  2023; 379 (6627): 41-45
- **Inference in artificial intelligence with deep optics and photonics.** *Nature*
  Wetzstein, G., Ozcan, A., Gigan, S., Fan, S., Englund, D., Soljacic, M., Denz, C., Miller, D. A., Psaltis, D.
  2020; 588 (7836): 39–47
- **Programmable photonic circuits.** *Nature*
  Bogaerts, W. n., Pérez, D. n., Capmany, J. n., Miller, D. A., Poon, J. n., Englund, D. n., Morichetti, F. n., Melloni, A. n.
  2020; 586 (7828): 207–16
- **Waves, modes, communications, and optics: a tutorial** *ADVANCES IN OPTICS AND PHOTONICS*
  Miller, D. A. B.
  2019; 11 (3): 679–825
- **Unscrambling light-automatically undoing strong mixing between modes** *LIGHT-SCIENCE & APPLICATIONS*
  Annoni, A., Guglielmi, E., Carminati, M., Ferrari, G., Sampietro, M., Miller, D. A. B., Melloni, A., Morichetti, F.
  2017; 6
- **Universal modal radiation laws for all thermal emitters** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Miller, D. A., Zhu, L., Fan, S.
  2017; 114 (17): 4336-4341
- **Attojoule Optoelectronics for Low-Energy Information Processing and Communications** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Miller, D. A.
  2017; 35 (3): 346-396
- **Perfect optics with imperfect components** *OPTICA*
  Miller, D. A.
  2015; 2 (8): 747-750
- **Establishing Optimal Wave Communication Channels Automatically** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Miller, D. A.
  2013; 31 (24): 3987-3994
- **Reconfigurable add-drop multiplexer for spatial modes** *OPTICS EXPRESS*
  Miller, D. A.
  2013; 21 (17): 20220-20229
- **Self-configuring universal linear optical component** *PHOTONICS RESEARCH*
  Miller, D. A.
  2013; 1 (1): 1-15
- **Self-aligning universal beam coupler** *OPTICS EXPRESS*
  Miller, D. A.
  2013; 21 (5): 6360-6370
- **How complicated must an optical component be?** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
  Miller, D. A.

2013; 30 (2): 238-251

- **Designing Linear Optical Components** *Optics in 2013 Special Issue, Optics and Photonics News, http://www.opnmagazine-digital.com/opn/december_2013#pg40*
  Miller, D., A. B.
  2013: 38
- **Establishing optimal wave communication channels automatically** *J. Lightwave Technol., http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6581883*
  Miller, D., A. B.
  2013; 31: 3987 – 3994
- **Self-configuring universal linear optical component** *Photon. Res., http://www.opticsinfobase.org/prj/abstract.cfm?URI=prj-1-1-1*
  Miller, D., A. B.
  2013; 1: 1-15
- **Reconfigurable add-drop multiplexer for spatial modes** *Opt. Express,http://www.opticsinfobase.org/oe/abstract.cfm?URI=oe-21-17-20220*
  Miller, D., A. B.
  2013; 21: 20220-20229
- **All linear optical devices are mode converters** *OPTICS EXPRESS*
  Miller, D. A.
  2012; 20 (21): 23985-23993
- **Energy consumption in optical modulators for interconnects** *OPTICS EXPRESS*
  Miller, D. A.
  2012; 20 (6): A293-A308
- **Device Requirements for Optical Interconnects to Silicon Chips** *PROCEEDINGS OF THE IEEE*
  Miller, D. A.
  2009; 97 (7): 1166-1185
- **Reconfigurable free-space mode generation and detection enabled by an active photonic integrated circuit coupled to a passive mode-selective interface.** *Communications physics*
  Boldin, A., Daly, U. J., Milanizadeh, M., Alsaigh, R., Chen, Z., Miller, D. A., Morichetti, F., Lavery, M. P.
  2026; 9 (1): 133
- **Three-wave interaction grating coupler with the sub-decibel insertion loss at normal incidence** *OPTICA*
  Valdez, C. G., Bongarz, S. A., Kroo, A. R., Miller, A. J., Digonnet, M. J. F., Miller, D. A. B., Solgaard, O.
  2026; 13 (2): 180-187
- **On-Chip Laser-Driven Free-Electron Spin Polarizer** *PHYSICAL REVIEW LETTERS*
  Woodahl, C., Murillo, M., Roques-Carmes, C., Karnieli, A., Miller, D. A. B., Solgaard, O.
  2026; 136 (6)
- **On-Chip Laser-Driven Free-Electron Spin Polarizer.** *Physical review letters*
  Woodahl, C., Murillo, M., Roques-Carmes, C., Karnieli, A., Miller, D. A., Solgaard, O.
  2026; 136 (6): 063802
- **Structuring light waves in 3D volumes with high precision using communication mode optics** *OPTICA*
  de Angelis, V., Dorrah, A., Ambrosio, L., Miller, D., Capasso, F.
  2025; 12 (9): 1502-1513
- **Transport Measurements of Majorization Order for Wave Coherence.** *Physical review letters*
  Guo, C., Miller, D. A., Fan, S.
  2025; 135 (5): 053801
- **Transport Measurements of Majorization Order for Wave Coherence** *PHYSICAL REVIEW LETTERS*
  Guo, C., Miller, D. A. B., Fan, S.
  2025; 135 (5)

- **Nonlocality in photonic materials and metamaterials: roadmap** *OPTICAL MATERIALS EXPRESS*
  Monticone, F., Mortensen, N., Fernandez-Dominguez, A. I., Luo, Y., Zheng, X., Tserkezis, C., Khurgin, J. B., Shahbazyan, T., Chaves, A. J., Peres, N. M. R., Wegner, G., Busch, K., Hu, et al
  2025; 15 (7): 1544-1709

- **Photonics Breakthroughs 2024: Arbitrary Mode Manipulation Using Reconfigurable Integrated Photonic Processors** *IEEE PHOTONICS JOURNAL*
  SeyedinNavadeh, S., Zanetto, F., Martinez, A., Ferrari, G., Miller, D. A. B., Melloni, A., Morichetti, F.
  2025; 17 (3)

- **High-contrast nulling in photonic meshes through architectural redundancy** *OPTICS LETTERS*
  Valdez, C. G., Sun, Z., Kroo, A. R., Miller, D. A. B., Solgaard, O.
  2025; 50 (11): 3660-3663

- **Bounds on the Coupling Strengths of Communication Channels and Their Information Capacities** *IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION*
  Kuang, Z., Miller, D. A. B., Miller, O. D.
  2025; 73 (6): 3959-3974

- **Automated Modal Analysis of Entanglement with Bipartite Self-Configuring Optics** *ACS PHOTONICS*
  Roques-Carmes, C., Karnieli, A., Miller, D. A. B., Fan, S.
  2025

- **Unitary control of multiport wave transmission** *PHYSICAL REVIEW A*
  Guo, C., Miller, D. A. B., Fan, S.
  2025; 111 (2)

- **Leveraging Architectural Redundancy for High Contrast Nulling with Photonic Meshes**
  Valdez, C. G., Kroo, A. R., Sun, Z., Miller, D. A. B., Solgaard, O., IEEE
  IEEE.2025

- **Reconfigurable Photonic Integrated Circuit for All-Optical Matrix Inversion**
  Cavicchioli, G., Miller, D. A. B., Engheta, N., Melloni, A., Morichetti, F.
  edited by Witzens, J., Poon, J., Zimmermann, L., Freude, W.
  SPRINGER INTERNATIONAL PUBLISHING AG.2024: 477-483

- **AstroPIC: Near-Infrared photonic integrated circuit coronagraph architecture for the Habitable Worlds Observatory**
  Sirbu, D., Belikov, R., Fogarty, K., Valdez, C., Sun, Z., Kroo, A., Solgaard, O., Miller, D. A. B., Guyon, O.
  edited by Matsuura, S., Perrin, M. D., Coyle, L. E.
  SPIE-INT SOC OPTICAL ENGINEERING.2024

- **Integrated Photonic Processors for Optical Free-Space Links [Invited Paper]**
  SeyedinNavadeh, S., Rojas, A., di Tria, A., Sacchi, E., Zanetto, F., Ferrari, G., Sampietro, M., Miller, D. A. B., Melloni, A., Morichetti, F., IEEE
  IEEE.2024

- **Scalable low-latency optical phase sensor array** *OPTICA*
  Sun, Z., Pai, S., Valdez, C., Milanizadeh, M., Melloni, A., Morichetti, F., Miller, D. A. B., Solgaard, O.
  2023; 10 (9): 1165-1172

- **Experimentally realized in situ backpropagation for deep learning in photonic neural networks.** *Science (New York, N.Y.)*
  Pai, S., Sun, Z., Hughes, T. W., Park, T., Bartlett, B., Williamson, I. A., Minkov, M., Milanizadeh, M., Abebe, N., Morichetti, F., Melloni, A., Fan, S., Solgaard, et al
  2023; 380 (6643): 398-404

- **Power monitoring in a feedforward photonic network using two output detectors.** *Nanophotonics (Berlin, Germany)*
  Pai, S., Valdez, C., Park, T., Milanizadeh, M., Morichetti, F., Melloni, A., Fan, S., Solgaard, O., Miller, D. A.
  2023; 12 (5): 985-991

- **Power monitoring in a feedforward photonic network using two output detectors** *NANOPHOTONICS*
  Pai, S., Valdez, C., Park, T., Milanizadeh, M., Morichetti, F., Melloni, A., Fan, S., Solgaard, O., Miller, D. A. B.

2023

- **Programmable Photonic Architecture Solving Systems of Ordinary Differential Equations**
  Cavicchioli, G., Melloni, A., Miller, D. A. B., Engheta, N., Morichetti, F., IEEE
  IEEE.2023
- **Automatic setting of multiple FSO orthogonal communication channels between photonic chips**
  SeyedinNavadeh, S., Milanizadeh, M., Zanetto, F., Grimaldi, V., De Vita, C., Ferrari, G., Miller, D. A. B., Melloni, A., Morichetti, F., IEEE
  IEEE.2023
- **Electromagnetic Information Theory in Phase-Space: A Quantum Tunnelling Approach**
  Gradoni, G., Miller, D. A. B., Creagh, S. C., IEEE
  IEEE.2023
- **Quantitative phase contrast imaging with a nonlocal angle-selective metasurface.** *Nature communications*
  Ji, A., Song, J. H., Li, Q., Xu, F., Tsai, C. T., Tiberio, R. C., Cui, B., Lalanne, P., Kik, P. G., Miller, D. A., Brongersma, M. L.
  2022; 13 (1): 7848
- **Multi-dimensional data transmission using inverse-designed silicon photonics and microcombs.** *Nature communications*
  Yang, K. Y., Shirpurkar, C., White, A. D., Zang, J., Chang, L., Ashtiani, F., Guidry, M. A., Lukin, D. M., Pericherla, S. V., Yang, J., Kwon, H., Lu, J., Ahn, et al
  2022; 13 (1): 7862
- **Spatially resolving amplitude and phase of light with a reconfigurable photonic integrated circuit** *OPTICA*
  Buetow, J., Eismann, J. S., Milanizadeh, M., Morichetti, F., Melloni, A., Miller, D. A. B., Banzer, P.
  2022; 9 (8): 939-946
- **Separating arbitrary free-space beams with an integrated photonic processor.** *Light, science & applications*
  Milanizadeh, M., SeyedinNavadeh, S., Zanetto, F., Grimaldi, V., De Vita, C., Klitis, C., Sorel, M., Ferrari, G., Miller, D. A., Melloni, A., Morichetti, F.
  2022; 11 (1): 197
- **Self-configuring programmable photonics for processing, communications and sensing**
  Miller, D. A. B., IEEE
  IEEE.2022
- **Photonic chips embrace piezo-optomechanics** *NATURE PHOTONICS*
  Miller, D. A. B.
  2021
- **Coherent self-control of free-space optical beams with integrated silicon photonic meshes** *PHOTONICS RESEARCH*
  Milanizadeh, M., Toso, F., Ferrari, G., Jonuzi, T., Miller, D. A. B., Melloni, A., Morichetti, F.
  2021; 9 (11): 2196-2204
- **Development of Quantum Interconnects (QuICs) for Next-Generation Information Technologies** *PRX QUANTUM*
  Awschalom, D., Berggren, K. K., Bernien, H., Bhave, S., Carr, L. D., Davids, P., Economou, S. E., Englund, D., Faraon, A., Fejer, M., Guha, S., Gustafsson, M., Hu, et al
  2021; 2 (1)
- **Wavelength-Division Multiplexed Optical Cryptocurrency**
  Pai, S., Abebe, N., Dubrovsky, M., Hwang, R. L., Karpov, M., Penkovsky, B., Miller, D. A. B., Solgaard, O., IEEE
  IEEE.2021
- **Self-Configuring Silicon-Photonic Receiver for Multimode Free Space Channels**
  SeyedinNavadeh, S., Milanizadeh, M., Benci, G., De Vita, C., Klitis, C., Sorel, M., Zanetto, F., Grimaldi, V., Ferrari, G., Miller, D. A. B., Melloni, A., Morichetti, F., IEEE
  IEEE.2021
- **Self-Configuring Complex Photonic Circuits**
  Miller, D. A. B., IEEE
  IEEE.2021

- **Multimode Free Space Optical Link Enabled by SiP Integrated Meshes**
  Milanizadeh, M., SeyedinNavadeh, S., Benci, G., De Vita, C., Klitis, C., Sorel, M., Zanetto, F., Ferrari, G., Miller, D. A. B., Melloni, A., Morichetti, F., IEEE
  IEEE.2021

- **Getting to femtojoule optics - what physics and what technology?**
  Miller, D. A. B., IEEE
  IEEE.2021

- **Quantitative Phase Contrast Imaging using Guided-mode Resonator Devices**
  Ji, A., Song, J., Li, Q., Kik, P. G., Miller, D. A. B., Brongersma, M. L., IEEE
  IEEE.2021

- **MEMS Photonic Networks For Parallelized Matrix Multiplication Using Wavelength-Division Multiplexing**
  Pai, S., Abebe, N., Hwang, R. L., Miller, D. A. B., Solgaard, O., IEEE
  IEEE.2021

- **Parallel Programming of an Arbitrary Feedforward Photonic Network** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Pai, S., Williamson, I. A. D., Hughes, T. W., Minkov, M., Solgaard, O., Fan, S., Miller, D. A. B.
  2020; 26 (5)

- **Adapting Mach-Zehnder Mesh Equalizers in Direct-Detection Mode-Division-Multiplexed Links** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Choutagunta, K., Roberts, I., Miller, D. A. B., Kahn, J. M.
  2020; 38 (4): 723–35

- **Parallel Fault-Tolerant Programming and Optimization of Photonic Neural Networks**
  Pai, S., Williamson, I. A. D., Minkov, M., Hughes, T. W., Solgaard, O., Fan, S., Miller, D. A. B., IEEE
  IEEE.2020

- **Saving Energy and Increasing Density in Information Processing Using Photonics**
  Miller, D. A. B., IEEE
  IEEE.2020

- **Experimental band structure spectroscopy along a synthetic dimension.** *Nature communications*
  Dutt, A., Minkov, M., Lin, Q., Yuan, L., Miller, D. A., Fan, S.
  2019; 10 (1): 3122

- **Matrix Optimization on Universal Unitary Photonic Devices** *PHYSICAL REVIEW APPLIED*
  Pai, S., Bartlett, B., Solgaard, O., Miller, D. A. B.
  2019; 11 (6)

- **Experimental Demonstration of Dynamical Input Isolation in Nonadiabatically Modulated Photonic Cavities** *ACS PHOTONICS*
  Dutt, A., Minkov, M., Lin, Q., Yuan, L., Miller, D. A. B., Fan, S.
  2019; 6 (1): 162–69

- **Experimental Band Structure Spectroscopy along the Synthetic Dimension**
  Dutt, A., Minkov, M., Lin, Q., Yuan, L., Miller, D. A. B., Fan, S., IEEE
  IEEE.2019

- **Ten-million years of activity within the Eastern California Shear Zone from U–Pb dating of fault-zone opal** *Earth and Planetary Science Letters*
  Nuriel, P., Miller, D. M., Schmitt, K. M., Coble, M. A., Maher, K.
  2019; 521: 37-45

- **Unscrambling light-automatically undoing strong mixing between modes.** *Light, science & applications*
  Annoni, A., Guglielmi, E., Carminati, M., Ferrari, G., Sampietro, M., Miller, D. A., Melloni, A., Morichetti, F.
  2017; 6 (12): e17110

- **Better choices than optical angular momentum multiplexing for communications** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

Miller, D. A. B.
2017; 114 (46): E9755–E9756

- **Better choices than optical angular momentum multiplexing for communications.** *Proceedings of the National Academy of Sciences of the United States of America*
  Miller, D. A.
  2017; 114 (46): E9755-E9756
- **Arbitrary and self-configuring photonic circuits for sensing and processing**
  Miller, D. A. B., IEEE
  IEEE.2017: 51–52
- **Attojoule optoelectronics-saving even more energy with optics**
  Miller, D. A. B., IEEE
  IEEE.2017: 89–90
- **Applied Optics. Sorting out light.** *Science*
  Miller, D. A.
  2015; 347 (6229): 1423-1424
- **Design of large scale plasmonic nanoslit arrays for arbitrary mode conversion and demultiplexing.** *Optics express*
  Wahl, P., Tanemura, T., Vermeulen, N., Van Erps, J., Miller, D. A., Thienpont, H.
  2014; 22 (1): 646-660
- **Design of large scale plasmonic nanoslit arrays for arbitrary mode conversion and demultiplexing** *Conference on Nanophotonics V*
  Wahl, P., Tanemura, T., Vermeulen, N., Van Erps, J., Miller, D. A., Thienpont, H.
  SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Surface-Normal Ge/SiGe Asymmetric Fabry-Perot Optical Modulators Fabricated on Silicon Substrates** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Audet, R. M., Edwards, E. H., Balram, K. C., Claussen, S. A., Schaevitz, R. K., Tasyurek, E., Rong, Y., Fei, E. I., Kamins, T. I., Harris, J. S., Miller, D. A.
  2013; 31 (24): 3995-4003
- **Modal Source Radiator Model for Arbitrary Two-Dimensional Arrays of Subwavelength Apertures on Metal Films** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Tanemura, T., Wahl, P., Fan, S., Miller, D. A.
  2013; 19 (3)
- **Nanoscale resonant-cavity-enhanced germanium photodetectors with lithographically defined spectral response for improved performance at telecommunications wavelengths** *OPTICS EXPRESS*
  Balram, K. C., Audet, R. M., Miller, D. A.
  2013; 21 (8): 10228-10233
- **Energy-per-Bit Limits in Plasmonic Integrated Photodetectors** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Wahl, P., Tanemura, T., Debaes, C., Vermeulen, N., van Erps, J., Miller, D. A., Thienpont, H.
  2013; 19 (2)
- **Light emission from strained germanium** *NATURE PHOTONICS*
  Jain, J. R., Hryciw, A., Baer, T. M., Miller, D. A., Brongersma, M. L., Howe, R. T.
  2013; 7 (3): 162-163
- **Highly Tailored Computational Electromagnetics Methods for Nanophotonic Design and Discovery** *PROCEEDINGS OF THE IEEE*
  Liu, V., Miller, D. A., Fan, S.
  2013; 101 (2): 484-493
- **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

- **B-CALM: AN OPEN-SOURCE MULTI-GPU-BASED 3D-FDTD WITH MULTI-POLE DISPERSION FOR PLASMONICS** *PROGRESS IN ELECTROMAGNETICS RESEARCH-PIER*
  Wahl, P., Ly-Gagnon, D., Bebaes, C., Van Erps, J., Vermeulen, N., Miller, D. A., Thienpont, H.
  2013; 138: 467-478
- **Attojoule optoelectronics - why and how** *IEEE-Photonics-Society Summer Topical Meeting*
  Miller, D. A.
  IEEE.2013: 28–29
- **Ge/SiGe Quantum Well Asymmetric Fabry-Perot Modulators on Silicon Substrates** *IEEE-Photonics-Society Summer Topical Meeting*
  Audet, R. M., Edwards, E. H., Balram, K., Rong, Y., Harris, J. S., Miller, D. A.
  IEEE.2013: 248–249
- **Separating arbitrary overlapping spatial modes losslessly and without calculations** *IEEE-Photonics-Society Summer Topical Meeting*
  Miller, D. A.
  IEEE.2013: 101–102
- **Nanoscale Integrated Planar Multispectral Image Sensors**
  Balram, K., C., Miller, D., A. B.
  2013
- **Separating arbitrary overlapping spatial modes losslessly and without calculations** *IEEE Photonics Society Summer Topical Meetings, Space Division Multiplexing for Optical Communications*
  Miller, D., A. B.
  2013
- **Nanoscale resonant-cavity-enhanced germanium photodetectors with lithographically defined spectral response for improved performance at telecommunications wavelengths** *2nd IEEE-Photonics-Society Optical Interconnects Conference*
  Balram, K. C., Audet, R. M., Miller, D. A.
  IEEE.2013: 25–26
- **Energy-per-bit and noise limits in plasmonic intergrated photodetectors** *Conference on Integrated Optics - Physics and Simulations*
  Wahl, P., Tanemura, T., Debaes, C., Vermeulen, N., Van Erps, J., Miller, D. A., Thiempont, H.
  SPIE-INT SOC OPTICAL ENGINEERING.2013
- **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
- **Ultra-compact photonic crystal waveguide spatial mode converter and its connection to the optical diode effect** *OPTICS EXPRESS*
  Liu, V., Miller, D. A., Fan, S.
  2012; 20 (27): 28388-28397
- **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
- **Self-aligned silicon fins in metallic slits as a platform for planar wavelength-selective nanoscale resonant photodetectors** *OPTICS EXPRESS*
  Balram, K. C., Miller, D. A.
  2012; 20 (20): 22735-22742
- **B-CALM: An open-source GPU-based 3D-FDTD with multi-pole dispersion for plasmonics** *11th International Conference on Numerical Simulation of Optoelectronic Devices in Optical and Quantum Electronics (NUSOD)*
  Wahl, P., Ly-Gagnon, D., Debaes, C., Miller, D. A., Thienpont, H.
  SPRINGER.2012: 285–90
- **A micromachining-based technology for enhancing germanium light emission via tensile strain** *NATURE PHOTONICS*
  Jain, J. R., Hryciw, A., Baer, T. M., Miller, D. A., Brongersma, M. L., Howe, R. T.

2012; 6 (6): 398-405

- **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 Limits to the Optical Performance of Asymmetric Fabry-Perot Electroabsorption Modulators** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Audet, R. M., Edwards, E. H., Wahl, P., Miller, D. A.
  2012; 48 (2): 198-209
- **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
- **B-CALM: An Open-Source GPU-based 3D-FDTD with Multi-Pole Dispersion for Plasmonics** *Conference on Optical Modelling and Design II*
  Wahl, P., Ly-Gagnon, D., Debaes, C., Miller, D. A., Thienpont, H.
  SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Routing and photodetection in subwavelength plasmonic slot waveguides** *NANOPHOTONICS*
  Ly-Gagnon, D., Balram, K. C., White, J. S., Wahl, P., Brongersma, M. L., Miller, D. A.
  2012; 1 (1): 9-16
- **Self-aligned Silicon Fins in Metallic Slits as a Platform for Planar Tunable Nanoscale Resonant Photodetectors**
  Balram, K., C., Miller, D., A. B.
  2012
- **Routing and Detection of Light on Deeply Subwavelength scale in Two-conductor Metallic Slot Waveguides**
  Balram, K., C., Ly-Gagnon, D., S., White, J., Wahl, P., Brongersma, M., Miller, D., A. B.
  2012
- **Energy use in optical modulators**
  Miller, D., A. B.
  2012
- **Routing and Photodetection in Subwavelength Plasmonic Slot Waveguides** *Nanophotonics*
  Ly-Gagnon, D., Balram, Krishna, C., White, Justin, S., Wahl, P., Brongersma, Mark, L., Miller, David, A. B.
  2012; 1: 9-16
- **Strained germanium thin film membrane on silicon substrate for optoelectronics** *OPTICS EXPRESS*
  Nam, D., Sukhdeo, D., Roy, A., Balram, K., Cheng, S., Huang, K. C., Yuan, Z., Brongersma, M., Nishi, Y., Miller, D., Saraswat, K.
  2011; 19 (27): 25866-25872
- **Tensile-strained germanium-on-insulator substrate fabrication for silicon-compatible optoelectronics** *OPTICAL MATERIALS EXPRESS*
  Jain, J. R., Ly-Gagnon, D., Balram, K. C., White, J. S., Brongersma, M. L., Miller, D. A., Howe, R. T.
  2011; 1 (6): 1121-1126
- **Indirect absorption in germanium quantum wells** *AIP ADVANCES*
  Schaevitz, R. K., Ly-Gagnon, D. S., Roth, J. E., Edwards, E. H., Miller, D. A.
  2011; 1 (3)
- **Thin Dielectric Spacer for the Monolithic Integration of Bulk Germanium or Germanium Quantum Wells With Silicon-on-Insulator Waveguides** *IEEE PHOTONICS JOURNAL*
  Ren, S., Kamins, T. I., Miller, D. A.
  2011; 3 (4): 739-747
- **Multiple-Wavelength Focusing of Surface Plasmons with a Nonperiodic Nanoslit Coupler** *NANO LETTERS*
  Tanemura, T., Balram, K. C., Ly-Gagnon, D., Wahl, P., White, J. S., Brongersma, M. L., Miller, D. A.
  2011; 11 (7): 2693-2698

- **Selective epitaxial growth of Ge/Si0.15Ge0.85 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)
- **Design methodology for compact photonic-crystal-based wavelength division multiplexers** *OPTICS LETTERS*
  Liu, V., Jiao, Y., Miller, D. A., Fan, S.
  2011; 36 (4): 591-593
- **Thin Dielectric Spacer for the Monolithic Integration of Bulk Germanium Quantum Wells With Silicon-on-Insulator Waveguides** *IEEE Photonics Journal*
  Ren, S., Kamins, T., I., Miller, D., A. B.
  2011; 3 (4): 739-747
- **On-Chip Optical Propagation and Photodetection in Nanometer-Scale Two-Conductor Plasmonic Waveguides**
  Ly-Gagnon, D., s., Balram, K., C., White, J., S., Wahl, P., Brongersma, M., L., Miller, D., A. B.
  2011
- **A Ge/SiGe Quantum Well Waveguide Modulator Monolithically Integrated with SOI Waveguides**
  Ren, S., Rong, Y., Claussen, S., Schaevitz, R., Kamins, T., I., Harris, J., S., Miller, David, A.B
  2011
- **Ge Quantum Well Resonator Modulators**
  Edwards, E., H., Audet, R., M., Fei, E., Shambat, G., Schaevitz, R., K., Rong, Y., Miller, David, A.B
  2011
- **Simple Electroabsorption Calculator for Germanium Quantum Well Devices**
  Schaevitz, R., K., Edwards, E., H., Ren, S., Ly-Gagnon, D., S., Audet, R., M., Rong, Y., Miller, David, A.B
  2011
- **Measurement and modeling of ultrafast carrier dynamics and transport in germanium/silicon-germanium quantum wells** *OPTICS EXPRESS*
  Claussen, S. A., Tasyurek, E., Roth, J. E., Miller, D. A.
  2010; 18 (25): 25596-25607
- **Optical interconnects to electronic chips** *APPLIED OPTICS*
  Miller, D. A.
  2010; 49 (25): F59-F70
- **The role of optics in computing** *NATURE PHOTONICS*
  Miller, D. A.
  2010; 4 (7): 406-406
- **Are optical transistors the logical next step?** *NATURE PHOTONICS*
  Miller, D. A.
  2010; 4 (1): 3-5
- **Surface-Normal, Asymmetric Fabry-Perot Quantum-Confined Stark Effect Electro-Absorption Modulator on Silicon**
  Audet, R., M., Claussen, S., A., Edwards, E., H., Ren, S., Schaevitz, T., k., Tasyurek, E., Miller, David, A.B
  2010
- **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
- **High-Efficiency p-i-n Photodetectors on Selective-Area-Grown Ge for Monolithic Integration** *IEEE ELECTRON DEVICE LETTERS*
  Yu, H., Ren, S., Jung, W. S., Okyay, A. K., Miller, D. A., Saraswat, K. C.
  2009; 30 (11): 1161-1163

- **Effect of uniaxial-strain on Ge p-i-n photodiodes integrated on Si** *APPLIED PHYSICS LETTERS*
  Yu, H., Kim, D., Ren, S., Kobayashi, M., Miller, D. A., Nishi, Y., Saraswat, K. C.
  2009; 95 (16)
- **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
- **Modeling of Plasmonic Waveguide Components and Networks** *JOURNAL OF COMPUTATIONAL AND THEORETICAL NANOSCIENCE*
  Veronis, G., Kocabas, S. E., Miller, D. A., Fan, S.
  2009; 6 (8): 1808-1826
- **Low capacitance CMOS silicon photodetectors for optical clock injection** *APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING*
  Latif, S., Kocabas, S. E., Tang, L., Debaes, C., Miller, D. A.
  2009; 95 (4): 1129-1135
- **Metal-dielectric-metal plasmonic waveguide devices for manipulating light at the nanoscale** *CHINESE OPTICS LETTERS*
  Veronis, G., Yu, Z., Kocabas, S. E., Miller, D. A., Brongersma, M. L., Fang, S.
  2009; 7 (4): 302-308
- **Metallic nanodevices for chip-scale optical interconnects** *JOURNAL OF NANOPHOTONICS*
  Tang, L., Miller, D. A.
  2009; 3
- **Modal analysis and coupling in metal-insulator-metal waveguides** *PHYSICAL REVIEW B*
  Kocabas, S. E., Veronis, G., Miller, D. A., Fan, S.
  2009; 79 (3)
- **Plasmonic device in silicon CMOS** *Electronics Lett.*
  Tang, L., Latif, S., Miller, D., A. B.
  2009; 45: 706-708
- **High Efficiency Monolithic Photodetectors for Integrated Optoelectronics in the Near Infrared** *22nd Annual Meeting of the IEEE-Photonics-Society*
  Okyay, A. K., Onbasli, M. C., Ercan, B., Yu, H., Ren, S., Miller, D. A., Saraswat, K. C., Nayfeh, A. M.
  IEEE.2009: 303–304
- **Characteristic Impedance Model for Plasmonic Metal Slot Waveguides** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Ly-Gagnon, D., Kocabas, S. E., Miller, D. A.
  2008; 14 (6): 1473-1478
- **Transmission Line and Equivalent Circuit Models for Plasmonic Waveguide Components** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Kocabas, S. E., Veronis, G., Miller, D. A., Fan, S.
  2008; 14 (6): 1462-1472
- **Optical spatial quantization for higher performance analog-to-digital conversion** *IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*
  Jarrahi, M., Fabian, R., Pease, W., Miller, D. A., Lee, T. H.
  2008; 56 (9): 2143-2150
- **Material properties of Si-Ge/Ge quantum wells** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Schaevitz, R. K., Roth, J. E., Ren, S., Fidaner, O., Miller, D. A.
  2008; 14 (4): 1082-1089
- **Nanometre-scale germanium photodetector enhanced by a near-infrared dipole antenna** *NATURE PHOTONICS*
  Tang, L., Kocabas, S. E., Latif, S., Okyay, A. K., Ly-Gagnon, D., Saraswat, K. C., Miller, D. A.
  2008; 2 (4): 226-229

- **Wideband, low driving voltage traveling-wave Mach-Zehnder modulator for RF photonics** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Jarrahi, M., Lee, T. H., Miller, D. A.
  2008; 20 (5-8): 517-519
- **Optical switching based on high-speed phased array optical beam steering** *APPLIED PHYSICS LETTERS*
  Jarrahi, M., Fabian, R., Pease, W., Miller, D. A., Lee, T. H.
  2008; 92 (1)
- **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
- **Integrated Photodetectors in Metal Slot Plasmonic Waveguides** *Plasmonics and Metamaterials (META) 2008, OSA Fall Optics and Photonics Congress*
  Ly-Gagnon, D., S., Kocabas, S., E., Miller, D., A. B.
  2008
- **Plasmonic Device in CMOS**
  Tang, L., Latif, S., Miller, D., A. B.
  2008
- **Spectral Analysis of Scattering in Metal-Insulator-Metal Waveguides and Related Equivalent Circuit Models**
  Kocabas, S., E., Veronis, G., Miller, D., A. B., Fan, S., H.
  2008
- **Silicon germanium CMOS optoelectronic switching device: Bringing light to latch** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
  Okyay, A. K., Kuzum, D., Latif, S., Miller, D. A., Saraswat, K. C.
  2007; 54 (12): 3252-3259
- **An optical interconnect transceiver at 1550 nm using low-voltage electroabsorption modulators directly integrated to CMOS** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Roth, J. E., Palermo, S., Helman, N. C., Bour, D. P., Miller, D. A., Horowitz, M.
  2007; 25 (12): 3739-3747
- **Fundamental limit to linear one-dimensional slow light structures** *PHYSICAL REVIEW LETTERS*
  Miller, D. A.
  2007; 99 (20)
- **Fundamental limit for optical components** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS*
  Miller, D. A.
  2007; 24 (10): A1-A18
- **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
- **Germanium quantum wells for high-performance modulators in silicon photonics** *PHOTONICS SPECTRA*
  Miller, D. A.
  2007; 41 (9): 80-83
- **SiGe optoelectronic metal-oxide semiconductor field-effect transistor** *OPTICS LETTERS*
  Okyay, A. K., Pethe, A. J., Kuzum, D., Latif, S., Miller, D. A., Saraswat, K. C.
  2007; 32 (14): 2022-2024
- **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
- **Femtosecond carrier dynamics in Ge/SiGe quantum wells** *4th IEEE International Conference on Group IV Photonics*
  Claussen, S., Tang, L., Roth, J., Fidaner, O., Latif, S., Miller, D. A.

IEEE.2007: 187–189

- **Fundamental limit to optical component**
  Miller, D., A. B.
  2007
- **Rise-time measurements of low capacitance CMOS detectors using a pump-probe technique**
  Latif, S., Kocabas, S., E., Tang, L., Miller, D., A. B.
  2007
- **Plasmonic waveguides as transmission lines**
  Kocabas, S., E., Ly-Gagnon, D., S., Miller, D., A. B.
  2007
- **On perfect invisibility and cloaking**
  Miller, D., A. B.
  2007
- **Near-infrared photodetector enhanced by an open-sleeve dipole antenna**
  Tang, L., Kocabas, E., Latif, S., Okyay, A., K., Ly-Gagnon, D., Saraswat, K., C., Miller, David, A.B
  2007
- **1550 nm Optical Interconnect Transceiver with Low Voltage Electroabsorption Modulators Flip-Chip Bonded to 90 nm CMOS**
  Roth, J., E., Palermo, S., Helman, N., C., Bour, D., P., Miller, D., A. B., Horowitz, M., A.
  2007
- **Fundamental Limit to Delay-Bandwidth Product in One-Dimensional Linear Optical Structures** *Slow Light and Fast Light Topical Meeting*
  Miller, D, A. B.
  2007
- **Waveguide electroabsorption modulator on Si employing Ge/SiGe quantum wells**
  Fidaner, O., Okyay, A., K., Roth, J., E., Kuo, Y., H., Saraswat, K., C., Harris, J., S., Miller, David, A.B
  2007
- **Novel Si-based CMOS Optoelectronic Switching Device Operating in the Near Infrared**
  Okyay, A., K., Pethe, A., J., Kuzum, D., Latif, S., Miller, D., A. B., Saraswat, K., C.
  2007
- **The Fundamental Limit to Optical Components** *Optics and Photonics News*
  Miller, David, A. B.
  2007: 27
- **Optical modulator on Si employing Ge quantum wells**
  Roth, J., E., Fidner, O., Schaevitz, R., K., Edwards, E., H., Kuo, Y., H., Kamins, T., I., Miller, David, A.B
  2007
- **How to become invisible** *SPIE Newsroom, March 2007 http://newsroom.spie.org/x5923.xml?highlight=x535*
  Miller, D., A. B.
  2007
- **On perfect cloaking** *OPTICS EXPRESS*
  Miller, D. A.
  2006; 14 (25): 12457-12466
- **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
- **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)

- **Temporal and spectral nonspecularities in reflection at surface plasmon resonance** *APPLIED PHYSICS LETTERS*
  Yin, X., Hesselink, L., Chin, H., Miller, D. A.
  2006; 89 (4)
- **C-shaped nanoaperture-enhanced germanium photodetector** *OPTICS LETTERS*
  Tang, L., Miller, D. A., Okyay, A. K., Matteo, J. A., Yuen, Y., Saraswat, K. C., Hesselink, L.
  2006; 31 (10): 1519-1521
- **Self-aligned via and trench for metal contact in III-V semiconductor devices** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*
  Zheng, J. F., Demir, H. V., Sabnis, V. A., Fidaner, O., Harris, J. S., Miller, D. A.
  2006; 24 (3): 1117-1122
- **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
- **C-shaped Nano-Aperture-Enhanced Germanium Photodetector** *in Integrated Photonics Research and Applications/Nanophotonics, Technical Digest (CD) (Optical Society of America, 2006)*
  Tang, L., Miller, D., A., Okyay, A., K., Matteo, J., A., Yuen, Y., Saraswat, K., C.
  2006
- **Self-aligned via and trench for metal contact in III-V semiconductor deivces** *J. Vac. SCi. Technol. B*
  Zheng, J., F., Demir, H., V., Sabnis, V., A., Fidaner, O., Harris, J., S., Miller, D., A. B.
  2006; 24: 1117-1122
- **Performance Limit for Optical Components**
  Miller, D., A. B.
  2006
- **Systematic photonic crystal device design: global and local optimization and sensitivity analysis** *IEEE J. Quantum Electron.*
  Jiao, Y., Fan, S., Miller, D., A. B.
  2006; 42 (3): 266 – 279
- **Nonlinear Optical Effects in InxGa(1-x)As Quantum Systems for Saturable Absorbers**
  Aldaz, R., I., Wiemer, M., W., Miller, D., A. B., Harris, J., S.
  2006
- **Photonic crystals: Straightening out light** *Nature Materials*
  Miller, D., A. B.
  2006; 5: 83–84
- **Ge/SiGe Quantum Confined Stark Effect Modulators on Silicon** *SiGe Technology and Device Meeting*
  Harris, J., S., Kuo, Y., H., Miller, D., A. B.
  2006
- **Limit to the Performance of Optical Components** *in Photonic Metamaterials: From Random to Periodic, Technical Digest (CD) (Optical Society of America, 2006)*
  Miller, D., A. B.
  2006
- **Intimate monolithic integration of chip-scale photonic circuits** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Sabnis, V. A., Demir, H. V., Fidaner, O., Zheng, J. F., Harris, J. S., Miller, D. A., Li, N., Wu, T. C., Chen, H. T., Houng, Y. M.
  2005; 11 (6): 1255-1265
- **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

- **Relationship between the superprism effect in one-dimensional photonic crystals and spatial dispersion in nonperiodic thin-film stacks** *OPTICS LETTERS*
  Gerken, M., Miller, D. A.
  2005; 30 (18): 2475-2477
- **Limits on the performance of dispersive thin-film stacks** *APPLIED OPTICS*
  Gerken, M., Miller, D. A.
  2005; 44 (16): 3349-3357
- **Interferometric sensors for spectral imaging** *SENSORS AND ACTUATORS A-PHYSICAL*
  Stiebig, H., Knipp, D., Bhalotra, S. R., Kung, H. L., Miller, D. A.
  2005; 120 (1): 110-114
- **Misalignment-tolerant surface-normal low-voltage modulator for optical interconnects** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Helman, N. C., Roth, J. E., Bour, D. P., Altug, H., Miller, D. A.
  2005; 11 (2): 338-342
- **Silicon-based micro-Fourier spectrometer** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
  Knipp, D., Stiebig, H., Bhalotra, S. R., Bunte, E., Kung, H. L., Miller, D. A.
  2005; 52 (3): 419-426
- **Self-aligning planarization and passivation for integration applications in III-V semiconductor devices** *IEEE TRANSACTIONS ON SEMICONDUCTOR MANUFACTURING*
  Demir, H. V., Zheng, J. F., Sabnis, V. A., Fidaner, O., Hanberg, J., Harris, J. S., Miller, D. A.
  2005; 18 (1): 182-189
- **Filtering and High-Speed Switching Characteristics of a C-band Rapidly Tunable Wavelength-Selective MSM Detector**
  Ebrahimi, P., Chen, R., Willner, A., E., Miller, D., A. B.
  2005
- **Photonic Crystal Device Sensitivity Analysis and Optimization with Wannier Basis Gradients**
  Jiao, Y., Fan, S., Miller, D., A. B.
  2005
- **MSM-Based Integrated CMOS Wavelength Tunable Optical Receiver**
  chen, R., Chen, H., Miller, D., A., Ma, K., Harris, J., S.
  2005
- **Novel Electrically Controlled Rapidly Wavelength Selective Photodetection Using MSMs** *IEEE J. Selected Topics in Quantum Electronics*
  Chen, R., Miller, D., A. B., Ma, K., Harris Jr., J., S.
  2005; 11 (1): 184-9
- **MSM-based integrated CMOS wavelength-tunable optical receiver** *IEEE Photonics Technology Letters*
  Chen, R., Chin, H., Miller, D., A. B., Ma, K., Harris, J., S.
  2005; 17 (6): 1271-3
- **A Single Transverse-Mode Monolithically Integrated Long Vertical-Cavity Surface-Emitting Laser** *IEEE Photonics Technology Letters*
  Wiemer, M., W., Aldaz, R., I., Miller, D., A. B., Harris, J., S.
  2005; 17: 1366 – 1368
- **Silicon-Based Micro-Fourier Spectrometer** *IEEE Trans. on Electron Devices*
  Knipp, D., Stiebig, H., Bhalotra, Sameer, R., Bunte, E., Kung, Helen, L., Miller, David, A. B.
  2005; 3 (52): 419#426
- **Intimate monolithic integration of chip-scale photonic circuits** *IEEE J. Sel. Top. Quantum Electron.*
  Sabnis, V., A., Demir, H., V., Fidaner, O., Zheng, J., Harris Jr., J., S., Miller, D., A. B.
  2005; 11 (6): 1244 - 1256
- **Linear differential electro-optic conversion of sampled voltage signals using a MSM and multiple quantum well modulators**

Chin, H., Urata, R., Ma, K., Miller, D., A. B., Harris Jr., J., S.
2005

- **The Relationship between the Superprism Effect in One-Dimensional Photonic Crystals and Spatial Dispersion in Non-Periodic Thin-Film Stacks** *Optics Lett., selected for the October 10, 2005 issue of Virtual Journal of Nanoscale Science & Technology*
  Gerken, M., Miller, David, A. B.
  2005; 30 (18): 2475-7
- **Photonic Crystal Device Sensitivity Analysis with Wannier Basis Gradients** *Optics Letters*
  Jiao, Y., Fan, S., Miller, David, A. B.
  2005; 3 (30): 302 – 304
- **Novel on-chip fully monolithic integration of GaAs devices with completely fabricated Si CMOS circuits** *IEEE J. Sel. Top. Quantum Electron.*
  Ma, K., Chen, R., Miller, D., A. B., Harris Jr., J., S.
  2005; 11 (6): 1278 – 1283
- **Multifunctional integrated photonic switches** *IEEE J. Selected Topics in Quantum Electronics*
  Demir, H., V., Sabnis, V., A., Fidaner, O., Zheng, J., F., Harris Jr., J., S., Miller, D., A. B.
  2005; 11 (1): 86 – 98
- **Misalignment-Tolerant Surface-Normal Low-Voltage Modulator for Optical Interconnects** *IEEE J. Selected Topics in Quantum Electronics*
  Helman, Noah, C., Roth, Jonathan, E., Bour, David, P., Altug, H., Miller, David, A. B.
  2005; 11 (2): 338 - 342
- **Limits to the performance of dispersive thin-film stacks** *Applied Optics*
  Gerken, M., Miller, David, A. B.
  2005; 44 (18): 3349 – 3357
- **Demonstration of Systematic Photonic Crystal Device Design and Optimization By Low Rank Adjustments: an Extremely Compact Mode Separator** *Optics Letters*
  Jiao, Y., Fan, S., Miller, David, A. B.
  2005; 30 (2): 141-143
- **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
- **Spectral shaping of electrically controlled MSM-based rapidly tunable photodetectors**
  Chen, R., Fu, J., Miller, D., A. B., Harris Jr., J., S.
  2005
- **Quantum-confined Stark effect electroabsorption in Ge/SiGe quantum wells on silicon substrates**
  Kuo, Y., H, Lee, Y., Ren, S., Ge, Y., Miller, D., A. B., Harris, J., S.
  2005
- **Opportunities for Optics in Integrated Circuits Applications**
  Miller, D., A. B., Bhatnagar, A., Palermo, S., Emami-Neyestanak, A., Horowitz, M., A.
  2005
- **Wannier Basis Design and Optimization of a Photonic Crystal Waveguide Crossing** *IEEE Photonics Technology Letters*
  Jiao, Y., Mingaleev, Sergei, F., Schillinger, M., Miller, David, A. B., Fan, S., Busch, K.
  2005; 17 (9): 1875-7
- **Spectral Shaping of Electrically Controlled MSM-Based Tunable Photodetectors** *IEEE Photonics Technology Letters*
  Chen, R., Fu, J., Miller, D., A. B., Harris Jr., J., S.
  2005; 17: 2158-60
- **Photonic Crystal Device Optimization Without Increasing Fabrication Tolerances: A Mode Demultiplexer Design** *in Integrated Photonics Research and Applications/Nanophotonics for Information Systems, Technical Digest (Optical Society of America, 2005)*
  Jiao, Y., Fan, S., Miller, D., A. B.
  2005

- **Multifunctional Integrated Photonic Switches for Nanosecond Packet-Switched Wavelength Conversion** *in Integrated Photonics Research and Applications/Nanophotonics for Information Systems, Technical Digest (Optical Society of America, 2005)*
  Fidaner, O., Demir, H., V., Sabnis, V., A., Harris, J., S., Miller, D., A. B., Zheng, J., F.
  2005
- **Linear Electro-optic Conversion of Sampled Voltage Signals Using a Low-Temperature-Grown GaAs MSM and a Multiple Quantum Well Modulator**
  chin, H., Urata, R., chen, R., Ma, K., Miller, D., A., Harris, J., S.
  2005
- **Scalable wavelength-converting crossbar switches** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Demir, H. V., Sabnis, V. A., Zheng, J. F., Fidaner, O., Harris, J. S., Miller, D. A.
  2004; 16 (10): 2305-2307
- **Pump-probe measurements of CMOS detector rise time in the blue** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Bhatnagar, A., Latif, S., Debaes, C., Miller, D. A.
  2004; 22 (9): 2213-2217
- **Designing for beam propagation in periodic and nonperiodic photonic nanostructures: Extended Hamiltonian method** *PHYSICAL REVIEW E*
  Jiao, Y., Fan, S. H., Miller, D. A.
  2004; 70 (3)
- **Low-temperature growth of GaAs on Si used for ultrafast photoconductive switches** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Ma, K., Urata, R., Miller, D. A., Harris, J. S.
  2004; 40 (6): 800-804
- **High-speed optical switching based on diffusive conduction in an optical waveguide with surface-normal optical control** *JOURNAL OF APPLIED PHYSICS*
  Sabnis, V. A., Demir, H. V., Yairi, M. B., Harris, J. S., Miller, D. A.
  2004; 95 (5): 2258-2263
- **Large-signal response of p-i-n photodetectors using short pulses with small spot sizes** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Yairi, M. B., Demir, H. V., Atanackovic, P. B., Miller, D. A.
  2004; 40 (2): 143-151
- **Multilayer thin-film stacks with steplike spatial beam shifting** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Gerken, M., Miller, D. A.
  2004; 22 (2): 612-618
- **Optically controlled electroabsorption modulators for unconstrained wavelength conversion** *APPLIED PHYSICS LETTERS*
  Sabnis, V. A., Demir, H. V., Fidaner, O., Harris, J. S., Miller, D. A., Zheng, J. F., Li, N., Wu, T. C., Chen, H. T., Houng, Y. M.
  2004; 84 (4): 469-471
- **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
- **Receiverless detection schemes for optical clock distribution** *Conference on Quantum Sensing and Nanophotonic Devices*
  Bhatnagar, A., Debaes, C., Thienpont, H., Miller, D. A.
  SPIE-INT SOC OPTICAL ENGINEERING.2004: 352–359
- **Photonic nanostructures for wavelength division multiplexing** *Conference on Nanophotonics for Communication*
  Gerken, M., Miller, D. A.
  SPIE-INT SOC OPTICAL ENGINEERING.2004: 82–96
- **Wavelength division multiplexing using dispersive thin-film stacks** *6th International Conference on Transparent Optical Networks (ICTON 2004)*
  Gerken, M., Miller, D. A.
  IEEE.2004: 291–291

- **Novel Electrically Controlled Rapidly Wavelength Selective Photodetection Using MSMs**
  Chen, R., Miller, David, A. B., Ma, K., Harris Jr., James, S.
  2004
- **Transit-time limited response from low capacitance CMOS photodetectors**
  Bhatnagar, A., Latif, S., Miller, David, A. B.
  2004
- **Photonic nanostructures for wavelength division multiplexing**
  Gerken, M., Miller, David, A. B.
  2004
- **Misalignment-tolerant surface normal low-voltage modulator for optical interconnects at 1.5 microns**
  Helman, N., C., Roth, J., E., Bour, D., P., Miller, D., A. B.
  2004
- **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, J., S.
  2004; 12 (17): 3967-3971
- **Monolithically-integrated vertical cavity surface emitting laser incorporating a concave micromirror on a glass substrate**
  Aldaz, Rafael, I., Wiemer, Michael, W., Miller, David, A. B., Harris Jr., James, S.
  2004
- **Low-Voltage Surface-Normal InGaAsP/InP Modulator for Optical Interconnects**
  Helman, Noah, C., Roth, Jonathan, E., Altug, H., Miller, David, A. B., Bour, David, P.
  2004
- **Monolithic Integration of GaAs Devices with Completely Fabricated Si CMOS Circuits**
  Ma, K., Chen, R., Miller, David, A. B., Harris Jr., James, S.
  2004
- **Photodiode-driven quantum-well modulators for C-band wavelength conversion and broadcasting**
  Demir, H. V., Fidaner, O., Sabnis, Vijit, A., Harris Jr., James, S., Miller, David, A. B.
  2004
- **Optical Interconnection and Clocking for Electronic Chips**
  Bhatnagar, A., Miller, David, A. B.
  2004
- **Novel passivation and planarization in the integration if III-V semiconductor devices**
  Zheng, J., Hanberg, J., Demir, H. V., Sabnis, Vijit, A., Fidaner, O., Harris Jr., James, S., Miller, David, A.B
  2004
- **Multimode interference device in 2-D non-uniform photonic crystal slab**
  Jiao, Y., Yu, X., Fan, S., Miller, David, A. B.
  2004
- **Scalable wavelength-converting crossbar switches** *IEEE Photonics Technology Letters*
  Demir, H., V., Sabnis, V., A., Zheng, J., Fidaner, O., Harris Jr., J., S., Miller, D., A. B.
  2004; 16 (10): 2305-7
- **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; 84: 469-471
- **Multilayer Thin-Film Stacks With Steplike Spatial Beam Shifting** *J. Lightwave Technol.*
  Gerken, M., Miller, David, A. B.
  2004; 22: 612 – 618

- **Multilayer thin-film coatings for optical communication systems** *OSA Topical Meeting on Optical Interference Coatings 2004*
  Gerken, M., Miller, D., A. B.
  2004
- **Low-temperature growth of GaAs on Si used for ultrafast photoconductive switches** *IEEE Journal of Quantum Electronics*
  Ma, K., Urata, R., Miller, D., A. B., Harris Jr., J., S.
  2004; 40 (6): 800 – 804, 800-4
- **Electrically-reconfigurable integrated photonic switches** *2004 IEEE Lasers and Electro-Optics Society Annual Meeting*
  Fidaner, O., Demir, H. V., Sabnis, Vijit, A., Harris Jr., James, S., Miller, David, A. B., Zheng, J.
  2004
- **Designing for beam propagation in periodic and nonperiodic photonic nanostructures: Extended Hamiltonian method** *Phys. Rev E*
  Jiao, Y., Fan, S., H., Miller, D., A. B.
  2004; 70 (3): 0. 036612
- **Optical interconnection and clocking for electronic chips** *8th World Multi-Conference on Systemics, Cybernetics and Informatics*
  BHATNAGAR, A., Miller, D. A.
  INT INST INFORMATICS & SYSTEMICS.2004: 177–181
- **Electrically-reconfigurable integrated photonic switches** *17th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*
  Fidaner, O., Demir, H. V., Sabnis, V. A., Harris, J. S., Miller, D. A., Zheng, J. F.
  IEEE.2004: 455–456
- **Adaptive Coherence-Sensing Imaging Spectrometer**
  Barnhoefer, U., Bhalotra, S., R., Huang, Y., Miller, D., A. B.
  2004
- **Low-voltage surface-normal InGaAsP/InP modulator for optical interconnects** *17th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*
  Helman, N. C., Roth, J. E., Altug, H., Miller, D. A., Bour, D. P.
  IEEE.2004: 461–462
- **Photonic A/D conversion using low-temperature-grown GaAs MSM switches integrated with Si-CMOS** *JOURNAL OF LIGHTWAVE TECHNOLOGY*
  Urata, R., Nathawad, L. Y., Takahashi, R., Ma, K., Miller, D. A., Wooley, B. A., Harris, J. S.
  2003; 21 (12): 3104-3115
- **A 40-GHz-bandwidth, 4-bit, time-interleaved A/D converter using photoconductive sampling** *IEEE International Solid-State Circuits Conference*
  Nathawad, L. Y., Urata, R., Wooley, B. A., Miller, D. A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2003: 2021–30
- **Adaptive imaging spectrometer in a time-domain filtering architecture** *OPTICS EXPRESS*
  Jiao, Y., Bhalotra, S. R., Kung, H. L., Miller, D. A.
  2003; 11 (17): 1960-1965
- **Adaptive imaging spectrometer in a time-domain filtering architecturedaptive Imaging Spectrometer in a Time-Domain Filtering Architecture.** *Optics express*
  Jiao, Y., Bhalotra, S., Kung, H., Miller, D.
  2003; 11 (17): 1960-1965
- **Wavelength demultiplexer using the spatial dispersion of multilayer thin-film structures** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Gerken, M., Miller, D. A.
  2003; 15 (8): 1097-1099
- **Ultrafast optoelectronic sample-and-hold using low-temperature-grown GaAs MSM** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Urata, R., Takahashi, R., Sabnis, V. A., Miller, D. A., Harris, J. S.
  2003; 15 (5): 724-726

- **Latency reduction in optical interconnects using short optical pulses** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Agarwal, D., Keeler, G. A., Debaes, C., Nelson, B. E., Helman, N. C., Miller, D. A.
  2003; 9 (2): 410-418
- **Wavelength division multiplexed optical interconnect using short pulses** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Nelson, B. E., Keeler, G. A., Agarwal, D., Helman, N. C., Miller, D. A.
  2003; 9 (2): 486-491
- **Multilayer thin-film structures with high spatial dispersion** *APPLIED OPTICS*
  Gerken, M., Miller, D. A.
  2003; 42 (7): 1330-1345
- **Receiver-less optical clock injection for clock distribution networks** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Debaes, C., BHATNAGAR, A., Agarwal, D., Chen, R., Keeler, G. A., Helman, N. C., Thienpont, H., Miller, D. A.
  2003; 9 (2): 400-409
- **The benefits of ultrashort optical pulses in optically interconnected systems** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Keeler, G. A., Nelson, B. E., Agarwal, D., Debaes, C., Helman, N. C., BHATNAGAR, A., Miller, D. A.
  2003; 9 (2): 477-485
- **Novel optically-controlled optical switch based on intimate integration of surface-normal photodiode and waveguide electroabsorption modulator for wavelength conversion** *16th Annual Meeting of the IEEE Lasers and Electro-Optics Society*
  Demir, H. V., Sabnis, V. A., Fidaner, O., Latif, S., Harris, J. S., Miller, D. A., Zheng, J. F., Li, N., Wu, T. C., Houng, Y. M.
  IEEE.2003: 644–645
- **All-silicon standing-wave microspectrometer with tunable spectral resolution** *IEEE/LEOS International Conference on Optical MEMS*
  Bhalotra, S. R., Kung, H. L., Knipp, D., Stiebig, H., Miller, D. A.
  IEEE.2003: 26–27
- **Thin film technology based micro-Fourier spectrometer** *Conference on MOEMS and Miniaturized Systems III*
  Knipp, D., Stiebig, H., Bhalotra, S. R., Kung, H. L., Miller, D. A.
  SPIE-INT SOC OPTICAL ENGINEERING.2003: 127–138
- **Thin film technology based micro-Fourier spectrometer**
  Knipp, D., Stiebig, H., Bhalotra, S., R., Kung, H., L., Miller, D., A. B.
  2003
- **Scaling internet routers using optics**
  Keslassy, I., Chuang, S., Yu, K., Miller, D., Horowitz, M., Solgaard, O.
  2003
- **A 40-GHz-Bandwidth, 4-Bit, Time-Interleaved A/D Converter Using Photoconductive Sampling** *IEEE J. Solid-State Circuits*
  Nathawad, L., Y., Urata, R., Wooley, B., A., Miller, D., A. B.
  2003; 38: 2021 – 2030
- **A 20GHz bandwidth, 4b photoconductive-sampling time-interleaved CMOS ADC** *IEEE International Solid-State Circuits Conference*
  Nathawad, L. Y., Urata, R., Wooley, B. A., Miller, D. A.
  IEEE.2003: 320-?
- **Novel optically-controlled optical switch based on intimate integration of surface-normal photodiode and waveguide electroabsorption modulators for wavelength conversion**
  Demir, H. V., Sabnis, Vijit, A., Fidaner, O., Latif, S., Harris Jr., James, S., Miller, David, A. B.
  2003
- **Novel Electrically Tunable MSM Photodetector for Resolving WDM Channels**
  Chen, R., Chin, H., Miller, David, A. B.
  2003

- **Designing for beam propagation in periodic and nonperiodic photonic nanostructures: extended Hamiltonian method**
  Jiao, Y., Fan, S., Miller, David, A. B.
  2003
- **Adaptive spectra-selective imaging by real-time photoconductor bias modulation**
  Bhalotra, S., R., Roth, J., Jiao, Y., Kung, H., L., Urata, R., Miller, D., A. B.
  2003
- **Wavelength demultiplexer using the spatial dispersion of multilayer thin-film structures** *IEEE Photonics Technol. Lett.*
  Gerken, M., Miller, David, A. B.
  2003; 15: 1097-1099
- **Ultrafast Optoelectronics Sample and Hold using Low-Temperature-Grown GaAs MSM** *IEEE Photonics Technol. Lett.*
  Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B., Harris Jr., J., S.
  2003; 15: 724 – 726
- **The Benefits of Ultrashort Optical Pulses in Optically-Interconnected Systems** *IEEE J. Sel. Top. Quantum Electron.*
  Keeler, G., A., Nelson, B., E., Agarwal, D., Debaes, C., Helman, N., C., Bhatnagar, A., Miller, David, A.B
  2003; 9: 477-485
- **A 20 GHz bandwidth, 4 b photoconductive-sampling time-interleaved CMOS ADC**
  Nathawad, L., Y., Urata, R., Wooley, B., A., Miller, D., A. B.
  2003
- **Multilayer Thin-Film Structures with High Spatial Dispersion** *Applied Optics*
  Gerken, M., Miller, David, A. B.
  2003; 42: 1330 – 1345
- **Optical pump-probe measurements of the latency of silicon CMOS optical interconnects** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Keeler, G. A., Agarwal, D., Debaes, C., Nelson, B. E., Helman, N. C., Thienpont, H., Miller, D. A.
  2002; 14 (8): 1214-1216
- **Adaptive time-domain filtering for real-time spectral discrimination in a Michelson interferometer** *OPTICS LETTERS*
  Bhalotra, S. R., Kung, H. L., Jiao, Y., Miller, D. A.
  2002; 27 (13): 1147-1149
- **Equivalence of diffusive conduction and giant ambipolar diffusion** *JOURNAL OF APPLIED PHYSICS*
  Yairi, M. B., Miller, D. A.
  2002; 91 (7): 4374-4381
- **High-impedance high-frequency silicon detector response for precise receiverless optical clock injection** *Silicon-based and Hybrid Optoelectronics IV Conference*
  Debaes, C., Agarwal, D., BHATNAGAR, A., Thienpont, H., Miller, D. A.
  SPIE-INT SOC OPTICAL ENGINEERING.2002: 78–88
- **Standing-wave transform spectrometer based on integrated MEMS mirror and thin-film photodetector** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Kung, H. L., Bhalotra, S. R., Mansell, J. D., Miller, D. A., Harris, J. S.
  2002; 8 (1): 98-105
- **Demonstration of a Wavelength Division Multiplexed Chip-to-Chip Optical Interconnect**
  Nelson, B., E., Keeler, G., A., Agarwal, D., Helman, N., C., Miller, D., A. B.
  2002
- **Adaptive coherence im aging system with time-domain filtering**
  Jiao, Y., Bhalotra, S., R., Kung, H., L., Miller, D., A. B.
  2002
- **Large-signal response of high speed p-i-n photodetectors to short pulses with small spot sizes** *in CLEO 2002*
  Demir, H., V., Yairi, M., B., Atanackovic, P., Miller, D., A. B.

2002

- **Performance Enhancement of an Optical Interconnect Using Short Pulses from a Modelocked Diode Laser**
  Keeler, G., A., Agarwal, D., Nelson, B., E., Helman, N., C., Miller, D., A. B.
  2002
- **Optical Interconnect Operation with High Noise Immunity**
  Agarwal, D., Keeler, G., A., Nelson, B., E., Helman, N., C., Miller, D., A. B.
  2002
- **Cavity Resonance Tuning of Asymmetric Fabry-Perot MQW Modulators Following Flip-Chip Bonding to Silicon CMOS**
  Keeler, G, A., Helman, N., C., Atanackovic, P., Miller, D., A. B.
  2002
- **Wide bandwidth, large, and tunable polarization mode dispersion in multilayered omnidirectional reflectors** *Appl. Phys. Lett.*
  Wang, Z., Miller, David, A. B., Fan, S.
  2002; 81: 187-189
- **Standing-Wave Transform Spectrometer Based on Integrated MEMS Mirror and Thin-Film Photodetector** *IEEE J. Selected Topics Quantum Electron.*
  Kung, H., L., Bhalotra, S., R., Mansell, J., D., Miller, D., A. B., Harris Jr., J., S.
  2002; 8: 98 – 105
- **Integrated standing-wave transform spectrometer for near infr ared optical analysis** *in IEEE Lasers and Electro-Optics Society 2002 Annual Meeting*
  Bhalotra, S., R., Kung, H., L., Fu, J., Helman, N., C., Levi, O., Miller, D., A. B.
  2002
- **Differential optical remoting of ultrafast charge packets using self-linearized modulation** *15th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*
  Chin, H., Keeler, G. A., Helman, N. C., Wistey, M., Miller, D. A., Harris, J. S.
  IEEE.2002: 467–468
- **Thin-Film (DE)MUX based on Step-Like Spatial Beam Shifting**
  Gerken, M., Miller, D., A. B.
  2002
- **Thin-Film Wavelength Demultiplexer Based on Photonic Crystal and Group Velocity Effects**
  Gerken, M., Nelson, B., E., Miller, D., A. B.
  2002
- **Thin-Film (DE)MUX based on group-velocity effects**
  Gerken, M., Miller, D., A. B.
  2002
- **Transform spectrometer based on measuring the periodicity of Talbot self-images** *OPTICS LETTERS*
  Kung, H. L., BHATNAGAR, A., Miller, D. A.
  2001; 26 (21): 1645-1647
- **Spatiotemporal control of ultrashort optical pulses by refractive-diffractive-dispersive structured optical elements** *OPTICS LETTERS*
  Piestun, R., Miller, D. A.
  2001; 26 (17): 1373-1375
- **Optically controlled optical gate with an optoelectronic dual diode structure - theory and experiment** *OPTICAL AND QUANTUM ELECTRONICS*
  Yairi, M. B., Demir, H. V., Miller, D. A.
  2001; 33 (7-10): 1035-1054
- **Ultrafast differential sample and hold using low-temperature-grown GaAs MSM for photonic A/D conversion** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Urata, R., Takahashi, R., Sabnis, V. A., Miller, D. A., Harris, J. S.

2001; 13 (7): 717-719

- **Adaptive Imaging Spectrometer in a Time-Domain Filtering Architecture**
  Jiao, Y., Bhalotra, S., R., Kung, H., L., Miller, D., A. B.
  2001
- **High-speed Sample and Hold using Low Temperature Grown GaAs MSM for Photonic A/D Conversion**
  Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B., Harris, J., S.
  2001
- **Spatiotemporal control of ultrashort optical pulses by refractive-diffractive-dispersive structured optical elements** *Optics Lett.*
  Piestun, R., Miller, D., A. B.
  2001; 26: 1373-1375
- **Real-time discrimination of spectra by time-domain adaptive filtering in a Fourier transform interferometer**
  Bhalotra, S., R., Kung, H., L., Miller, D., A. B.
  2001
- **Latency in Short Pulse-based Optical Interconnects** *in IEEE Lasers and Electro-Optics Society 2001 Annual Meeting*
  Agarwal, D., Miller, D., A. B.
  2001
- **Optical Pump-Probe Latency Measurements of Silicon CMOS Optical Interconnects**
  Keeler, Gordon, A., Agarwal, D., Debaes, C., Nelson, Bianca, E., Helman, Noah, C., Miller, David, A. B.
  2001
- **Observation of wavelength-converting optical switching at 2.5 GHz in a surface-normal illuminated waveguide** *14th Annual Meeting of the IEEE Lasers-and-Electro-Optics-Society*
  Sabnis, V., Demir, H. V., Yairi, M., Miller, D. A., Harris, J. S.
  IEEE.2001: 362–363
- **Observation of Wavelength-Converting Optical Switching at 2.5 GHz in a Surface-Normal Illuminated Waveguide**
  Sabnis, V., Demir, H., V., Yairi, M., B., Miller, D., A. B., Harris Jr., J., S.
  2001
- **Compact Standing-Wave Transform Spectrometer Based on Integrated MEMS Mirror and Thin-Film Photodetector**
  Kung, H., L., Bhalotra, S., R., Miller, D., A. B.
  2001
- **Ultrafast differential sample and hold using low-temperature-grown GaAs MSM for photonic A/D conversion** *IEEE Photonics Tech. Lett.*
  Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B., Harris, J., S.
  2001; 13: 717-719
- **Transform spectrometer based on measuring the periodicity of Talbot self-images** *Optics Lett.*
  Kung, H., L., Bhatnagar, A., Miller, D., A. B.
  2001; 26: 1645-1647
- **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
- **Skew and jitter removal using short optical pulses for optical interconnection** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Keeler, G. A., Nelson, B. E., Agarwal, D., Miller, D. A.
  2000; 12 (6): 714-716
- **Wavelength monitor based on two single-quantum-well absorbers sampling a standing wave pattern** *APPLIED PHYSICS LETTERS*
  Kung, H. L., Miller, D. A., Atanackovic, P., Lin, C. C., Harris, J. S., Carraresi, L., Cunningham, J. E., Jan, W. Y.
  2000; 76 (22): 3185-3187
- **Electromagnetic degrees of freedom of an optical system** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*

Piestun, R., Miller, D. A.
2000; 17 (5): 892-902

- **Communicating with waves between volumes: evaluating orthogonal spatial channels and limits on coupling strengths** *APPLIED OPTICS*
Miller, D. A.
2000; 39 (11): 1681-1699

- **Compact transform spectrometer based on sampling a standing wave**
Kung, H., L., Bhalotra, S., R., Mansell, J., D., Miller, D., A. B.
2000

- **Spatio-temporal propagation of ultrashort pulses controlled by structured optical elements** *13th Annual Meeting of the IEEE Lasers-and-Electro-Optics-Society*
Piestun, R., Miller, D. A.
IEEE.2000: 294–295

- **Spatio-temporal propagation of ultrashort pulses controlled by structured optical elements**
Piestun, R., Miller, D., A. B.
2000

- **Parallel-plate MEMS Mirror Design for Large On-resonance Displacement**
Bhalotra, S., R., Mansell, J., D., Kung, H., L., Miller, D., A. B.
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; 76: 3185-3187

- **Rationale and Challenges for Optical Interconnects to Electronic Chips**
Miller, D., A. B.
2000

- **Compact transform spectrometer based on sampling a standing wave** *IEEE/LEOS International Conference on Optical MEMS*
Kung, H. L., Bhalotra, S. R., Mansell, J. D., Miller, D. A.
IEEE.2000: 19–20

- **Transform Spectrometer Based on Measuring Periodicity of Talbot Self-Images**
Kung, H., L., Bhatnagar, A., Miller, D., A. B.
2000

- **Parallel-plate MEMS mirror design for large on-resonance displacement** *IEEE/LEOS International Conference on Optical MEMS*
Bhalotra, S. R., Mansell, J. D., Kung, H. L., Miller, D. A.
IEEE.2000: 93–94

- **Wavelength Division Multiplexing 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, J., S.
2000

- **Optical Interconnects to silicon** *IEEE J. Selected Topics in Quantum Electronics*
Miller, D., A. B.
2000; 6: 1312-1317

- **Electromagnetic degrees of freedom of an optical system** *J. Opt. Soc. Am. A*
Piestun, R., Miller, D., A. B.
2000; 17: 892 – 902

- **Demonstration of an optoelectronic dual-diode optically controlled optical gate with a 20 picosecond repetition period** *Conference on Nonlinear Optics: Materials, Fundamentals, and Applications, Technical Digest*
Yairi, M. B., Demir, H. V., Coldren, C. W., Harris, J. S., Miller, D. A.
OPTICAL SOC AMERICA.2000: 168–170

- **Ultrafast Differential Sample and Hold using Low Temperature grown GaAs MSM for Photonic A/D Conversion**
  Urata, R., Takahashi, R., Sabnis, V., A., Miller, D., A. B.
  2000
- **Optical Remoting of Ultrafast Charge Packets Using Self-Linearized Modulation**
  Chin, H., Atanackovic, P., Miller, D., A. B.
  2000
- **Demonstration of an optoelectronic dual-diode optically controlled optical gate with a 20-ps repetition period**
  Yairi, M., B., Demir, H., V., Coldren, C., W., Harris, J., S., Miller, D., A. B.
  2000
- **Skew and jitter removal using short optical pulses for optical interconnection** *IEEE Photonics Technol. Lett.*
  Keeler, G., A., Nelson, B., E., Agarwal, D., Miller, D., A. B.
  2000; 12: 714 -716
- **Communicating with waves between volumes - evaluating orthogonal spatial channels and limits on coupling strengths** *Appl. Opt.*
  Miller, D., A. B.
  2000; 39: 1681 – 1699
- **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
- **Degrees of Freedom of an Electromagnetic Wave**
  Piestun, R., Miller, D., A. B.
  1999
- **Degrees of freedom of an electromagnetic wave** *18th Congress of the International Commission for Optics - Optics for the Next Millennium*
  Piestun, R., Miller, D. A.
  SPIE-INT SOC OPTICAL ENGINEERING.1999: 110–111
- **High-Speed, Optically-Controlled Surface-Normal Modulator Based on Diffusive Conduction** *Appl. Phys. Lett.*
  Yairi, M., B., Coldren, C., W., Miller, D., A. B., Harris Jr., J., S.
  1999; 5 (75): 597-599
- **Wavelength Division Multiplexed Optical Interconnects Using Femtosecond Optical Pulses**
  Agarwal, D., Keeler, Gordon, A., Nelson, Bianca, E., Miller, David, A. B.
  1999
- **Wavelength Monitor Based on Two Single Quantum Well Absorbers in a Standing Wave**
  Kung, H., L., Miller, D., A. B., Carraresi, L., Cunningham, J., E., Jan, W., Y.
  1999
- **Optically-Controlled Optical Gate Using a Double Diode Structure**
  Yairi, Micah, B., Demir, Hilmi, V., Coldren, Chris, W., Miller, David, A. B., Harris Jr., James, S.
  1999
- **Optical Interconnects Using Short Optical Pulses**
  Keeler, Gordon, A., Nelson, Bianca, E., Agarwal, D., Miller, David, A. B.
  1999
- **High-Speed Quantum Well Optoelectronic Gate Based on Diffuse Conduction Recovery**
  Yairi, M., B., Coldren, C., W., Miller, D., A. B., Harris, J., S.
  edited by Chavel, P., Miller, David, A. B., Thienpont, H.
  1998
- **Optics for Digital Information Processing**
  Miller, D., A. B.
  edited by Miller, A., Ebrahimzadeh, M., Finlayson, D., M.

1998

- **Dense Two-Dimensional Integration of Optoelectronics and Electronics for Interconnections**
  Miller, D., A. B.
  edited by Husain, A., Fallahi, M.
  1998

- **Communicating with Waves Between Volumes -- How Many Different Spatial Channels Are There?**
  Miller, D., A. B.
  edited by Chavel, P., Miller, David, A. B., Thienpont, H.
  1998

- **Spatial channels for communicating with waves between volumes** *Optics Lett.*
  Miller, D., A. B.
  1998; 23: 1645-1647

- **High-speed quantum well optoelectronic gate based on diffusive conduction recovery** *Optics in Computing 98 Meeting*
  Yairi, M. B., Coldren, C. W., Miller, D. A., Harris, J. S.
  SPIE - INT SOC OPTICAL ENGINEERING.1998: 10–13

- **Dual-function detector-modulator smart-pixel module** *APPLIED OPTICS*
  Krishnamoorthy, A. V., WOODWARD, T. K., Goossen, K. W., Walker, J. A., Hui, S. P., Tseng, B., Cunningham, J. E., Jan, W. Y., Kiamilev, F. E., Miller, D. A.
  1997; 36 (20): 4866-4870

- **Firehose architectures for free-space optically interconnected VLSI circuits** *JOURNAL OF PARALLEL AND DISTRIBUTED COMPUTING*
  Krishnamoorthy, A. V., Miller, D. A.
  1997; 41 (1): 109-114

- **Optical Receiver Sensitivity Improvement by Impulsive Coding** *OSA TOPS on Ultrafast Electronics and Optoelectronics*
  Boivin, L., Nuss, M., C., Shah, J., Miller, D., A. B., Haus, H., A.
  edited by Nuss, M., Bowers, J.
  Optical Society of America.1997: 63–67

- **Physical Reasons for Optical Interconnection** *Special Issue on Smart Pixels, Int'l J. Optoelectronics*
  Miller, D., A. B.
  1997; 3 (11): 155-168

- **Limit to the Bit-Rate Capacity of Electrical Interconnects from the Aspect Ratio of the System Architecture** *Special Issue on Parallel Computing with Optical Interconnects, J. Parallel and Distributed Computing*
  Miller, D., A. B., Özaktas, H., M.
  1997; 41: 42-52

- **Receiver Sensitivity Improvement by Impulsive Coding** *IEEE Photonics Technol. Lett.*
  Boivin, L., Nuss, M., C., Shah, J., Miller, D., A. B., Haus, H., A.
  1997; 5 (9): 684-686

- **Firehose Architectures for Free-Space Optically Interconnected VLSI Circuits** *J. Parallel and Distributed Computing*
  Krishnamoorthy, Ashok, V., Miller, David, A. B.
  1997; 41: 109-114

- **Photonic page buffer based on GaAs multiple-quantum-well modulators bonded directly over active silicon complementary-metal-oxide-semiconductor (CMOS) circuits: Errata** *APPLIED OPTICS*
  Krishnamoorthy, A. V., Ford, J. E., Goossen, K. W., Walker, J. A., Lentine, A. L., Hui, S. P., Tseng, B., Chirovsky, L. M., Leibenguth, R., Kossives, D., DAHRINGER, D., DASARO, L. A., Kiamilev, et al
  1996; 35 (23): 4637-4640

- **Photonic page buffer based on GaAs multiple-quantum-well modulators bonded directly over active silicon complementary-metal-oxide-semiconductor (CMOS) circuits** *APPLIED OPTICS*
  Krishnamoorthy, A. V., Ford, J. E., Goossen, K. W., Walker, J. A., Lentine, A. L., Hui, S. P., Tseng, B., Chirovsky, L. M., Leibenguth, R., Kossives, D., DAHRINGER, D., DASARO, L. A., Kiamilev, et al

1996; 35 (14): 2439-2448

- **Scaling optoelectronic-VLSI circuits into the 21st century: A technology roadmap** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Krishnamoorthy, A. V., Miller, D. A.
  1996; 2 (1): 55-76

- **Arrays of optoelectronic switching nodes comprised of flip-chip-bonded MQW modulators and detectors on silicon CMOS circuitry** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Lentine, A. L., Goossen, K. W., Walker, J. A., Chirovsky, L. M., DASARO, L. A., Hui, S. P., Tseng, B. T., Leibenguth, R. E., Kossives, D. P., DAHRINGER, D. W., BACON, D. D., WOODWARD, T. K., Miller, et al
  1996; 8 (2): 221-223

- **Digital Fourier Optics** *Appl. Optics*
  Ozaktas, H., M., Miller, D., A. B.
  1996; 35: 1212-1219

- **32 channel WDM graphic equalizer** *IEEE/LEOS 1996 Summer Topical Meeting - Advanced Applications of Lasers in Materials Processing*
  Ford, J. E., Walker, J. A., Nuss, M. C., Miller, D. A.
  IEEE.1996: A26–A27

- **Fabrication and testing of AMOEBA: An opto-electronic switch for multiprocessor networking** *IEEE/LEOS 1996 Summer Topical Meeting - Advanced Applications of Lasers in Materials Processing*
  Krishnamoorthy, A. V., Ford, J. E., Goossen, K. W., Walker, J. A., Tseng, B., Hui, S. P., Cunningham, J. E., Jan, W. Y., WOODWARD, T. K., Rozier, R. G., Kiamilev, F. E., Miller, D. A.
  IEEE.1996: B95–B96

- **WDM/SDM fiber network design for the AMOEBA optoelectronic switch** *IEEE/LEOS 1996 Summer Topical Meeting - Advanced Applications of Lasers in Materials Processing*
  Ford, J. E., Krishnamoorthy, A. V., Tsuda, S., Knox, W. H., Nuss, M. C., Miller, D. A.
  IEEE.1996: B97–B98

- **The AMOEBA chip: An optoelectronic switch for multiprocessor networking using dense-WDM** *3rd International Conference on Massively Parallel Processing Using Optical Interconnections (MPPOI 96)*
  Krishnamoorthy, A. V., Ford, J. E., Goossen, K. W., Walker, J. A., Tseng, B., Hui, S. P., Cunningham, J. E., Jan, W. Y., WOODWARD, T. K., Nuss, M. C., Rozier, R. G., Kiamilev, F. E., Miller, et al
  IEEE COMPUTER SOC.1996: 94–100

- **15 mu m solder bonding of GaAs/AlGaAs MQW devices to MOSIS 0.8 mu m CMOS for 1Gb/s two-beam smart-pixel receiver/transmitter** *1996 IEEE International Solid-State Circuits Conference*
  WOODWARD, T. K., Krishnamoorthy, A. V., Goossen, K. W., Walker, J. A., Lentine, A. L., NOVOTNY, R. A., DASARO, L. A., Chirovsky, L. M., Hui, S. P., Tseng, B., Kossives, D., DAHRINGER, D., Leibenguth, et al
  I E E E.1996: 406–407

- **Optical test of a photonic FIFO page buffer memory** *Conference on Optical Interconnects in Broadband Switching Architectures*
  Ford, J. E., Krishnamoorthy, A. V., Goossen, K. W., Walker, J. A., Miller, D. A., Morrison, R., Lentine, A. L., Hui, S. P., Tseng, B., Chirovsky, L. M., Leibenguth, R., Kossives, D., DAHRINGER, et al
  SPIE-INT SOC OPTICAL ENGINEERING.1996: 213–221

- **Scaling Optoelectronic-VLSI Circuits into the 21st Century: A Technology Roadmap** *IEEE J. Selected Topics in Quantum Electronics*
  Krishnamoorthy, Ashok, V., Miller, David, A. B.
  1996; 1 (2): 55-76

- **Arrays of Optoelectronic Switching Nodes Comprised of Flip-Chip-Bonded MQW Modulators and Detectors on Silicon CMOS Circuitry** *IEEE Photonics Technology Letters*
  Lentine, A., L., Goossen, K., W., Walker, J., A., Chirovsky, L., M. F., D'Asaro, L., A., Hui, S., P., Miller, David, A.B
  1996; 8: 221-223

- **15 µm solder bonding of GaAs/AlGaAs MQW devices to MOSIS 0.8 µm CMOS for 1 Gb/s two-beam smart-pixel receiver/transmitter**
  Woodward, T., K., Krishnamoorthy, A., V., Goossen, K., W., Walker, J., A., Lentine, A., L., Novotny, R., A., Miller, David, A.B
  1996

- **Dense Optical Interconnections for Silicon Electronics** *in Trends in Optics: Research, Developments, and Applications*
  Miller, David, A. B.
  edited by Consortini, A.
  Int'l Commission for Optics, Academic Press.1996: 207–222

- **Silicon Integrated Circuits Shine** *in News and Views, Nature*
  Miller, D., A. B.
  1996; 384: 307-308

- **3-D INTEGRATION OF MQW MODULATORS OVER ACTIVE SUBMICRON CMOS CIRCUITS - 375 MB/S TRANSIMPEDANCE RECEIVER TRANSMITTER CIRCUIT** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Krishnamoorthy, A. V., Lentine, A. L., Goossen, K. W., Walker, J. A., WOODWARD, T. K., Ford, J. E., APLIN, G. F., DASARO, L. A., Hui, S. P., Tseng, B., Leibenguth, R., Kossives, D., DAHRINGER, et al
  1995; 7 (11): 1288-1290

- **RING OSCILLATORS WITH OPTICAL AND ELECTRICAL READOUT BASED ON HYBRID GAAS MQW MODULATORS BONDED TO 0.8-MU-M SILICON VLSI CIRCUITS** *ELECTRONICS LETTERS*
  Krishnamoorthy, A. V., WOODWARD, T. K., NOVOTNY, R. A., Goossen, K. W., Walker, J. A., Lentine, A. L., DASARO, L. A., Hui, S. P., Tseng, B., Leibenguth, R., Kossives, D., DAHRINGER, D., Chirovsky, et al
  1995; 31 (22): 1917-1918

- **GAAS MQW MODULATORS INTEGRATED WITH SILICON CMOS** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Goossen, K. W., Walker, J. A., DASARO, L. A., Hui, S. P., Tseng, B., Leibenguth, R., Kossives, D., BACON, D. D., DAHRINGER, D., Chirovsky, L. M., Lentine, A. L., Miller, D. A.
  1995; 7 (4): 360-362

- **GaAs MQW Modulators Integrated with Silicon CMOS** *IEEE Photonics Technology Letters*
  Goossen, K., W., Walker, J., A., D'Asaro, L., A., Tseng, B., Leibenguth, R., Kossives, D., Miller, David, A.B
  1995; 7: 360-362

- **Demonstration of dense optoelectronic integration to Si CMOS for direct optical interfacing of logic circuits to fiber bundles** *21st European Conference on Optical Communication (ECOC 95)*
  Goossen, K. W., Lentine, A. L., Walker, J. A., DASARO, L. A., Hui, S. P., Tseng, B., Leibenguth, R., Cunningham, J. E., Kossives, D., BACON, D. D., DAHRINGER, D., Chirovsky, L. M., WOODWARD, et al
  IMEC VZW, INTEC DEPARTMENT.1995: 181–188

- **3-D integration of MQW SEED detectors and modulators over active sub-micron CMOS circuits: Application to a 2Kbit parallel photonic page buffer** *1995 Annual/8th Annual Meeting of the IEEE Lasers-and-Electro-Optics-Society (LEOS 95)*
  Krishnamoorthy, A. V., Ford, J. E., Goossen, K. W., Walker, J. A., Lentine, A. L., WOODWARD, T. K., DASARO, L. A., Hui, S. P., Tseng, B., Leibenguth, R., Kossives, D., DAHRINGER, D., Chirovsky, et al
  I E E E.1995: A75–A76

- **3-D integration of MQW modulators over active submicron CMOS circuits: 375 Mb/s transimpedance receiver-transmitter circuit** *IEEE Photonics Technology Letters*
  Krishnamoorthy, A., V., Lentine, A., L., Goossen, K., W., Walker, J., A., Woodward, T., K., Ford, J., E., Miller, David, A.B
  1995; 7: 1288-1290

- **Wavelength-division multiplexing with femtosecond pulses** *Optics Letters*
  Souza, E., A. De, Nuss, M., C., Knox, W., H., Miller, D., A. B.
  1995; 20: 1166-1168

- **Ring oscillators with optical and electrical readout based on hybrid GaAs MQW modulators bonded to 0.8 um silicon VLSI circuits** *Electronics Letters*
  Krishnamoorthy, A., V., Woodward, T., K., Novotny, R., A., Goossen, K., W., Walker, J., A., Lentine, A., L., Miller, David, A.B
  1995; 31: 1917-1918

- **LINEAR IMAGE DIFFERENTIATION BY USE OF ANALOG DIFFERENTIAL SELF-ELECTRO-OPTIC EFFECT DEVICES** *OPTICS LETTERS*
  DESOUZA, E. A., Carraresi, L., Miller, D. A.
  1994; 19 (22): 1882-1884

- **CARRIER ESCAPE TUNNELING OUT OF SHALLOW MULTIPLE-QUANTUM WELLS STUDIED BY TRANSIENT 4-WAVE-MIXING** *8th International Conference on Hot Carriers in Semiconductors*
  VONPLESSEN, G., Feldmann, J., Goossen, K. W., SCHLICHTHERLE, B., Gobel, E. O., Miller, D. A., Cunningham, J. E.
  IOP PUBLISHING LTD.1994: 523–25
- **SELF-LINEARIZED ANALOG DIFFERENTIAL SELF-ELECTRO-OPTIC-EFFECT DEVICE** *APPLIED OPTICS*
  DESOUZA, E. A., Carraresi, L., Boyd, G. D., Miller, D. A.
  1994; 33 (8): 1492-1497
- **WAVELENGTH-SELECTIVE DETECTOR BASED ON A QUANTUM-WELL IN A STANDING-WAVE** *APPLIED PHYSICS LETTERS*
  Carraresi, L., DESOUZA, E. A., Miller, D. A., Jan, W. Y., Cunningham, J. E.
  1994; 64 (2): 134-136
- **Laser Tuners and Wavelength-Sensitive Detectors Based on Absorbers in Standing Waves** *IEEE Journal of Quantum Electronics*
  Miller, D., A. B.
  1994; 30: 732-749
- **DENSE WDM WITH FEMTOSECOND LASER PULSES** *7th Annual Meeting of the IEEE Lasers-and-Electro-Optics-Society*
  Nuss, M. C., Knox, W. H., Miller, D. A.
  IEEE.1994: 199–200
- **VERTICAL TRANSPORT STUDIED BY SUBPICOSECOND 4-WAVE-MIXING EXPERIMENTS** *NATO Advanced Research Workshop on Coherent Optical Interactions in Semiconductors*
  Feldmann, J., VONPLESSEN, G., Meier, T., Thomas, P., Gobel, E. O., Goossen, K. W., Miller, D. A., Cunningham, J. E.
  PLENUM PRESS DIV PLENUM PUBLISHING CORP.1994: 223–243
- **Linear image differentiation by use of analog differential self-electro- optic effect devices** *Optics Letters*
  DeSouza, E., A., Carraresi, L., Miller, D., A. B.
  1994; 19: 1882-1884
- **Wavelength-selective detector based on a quantum well in a standing wave** *Appl. Phys. Lett.*
  Carraresi, L., DeSouza, E., A., Miller, D., A. B., Jan, W., Y., Cunningham, J., E.
  1994; 64: 134-136
- **Femtosecond pulse distortion in GaAs quantum wells and its effect on pump-probe or four-wave-mixing experiments** *Phys. Rev. B*
  Kim, D., S., Shah, J., Miller, D., A. B., Damen, T., C., Vinattieri, A., Schäfer, W.
  1994; 50: 18240-18249
- **Self-linearized analog differential self-electro-optic-effect device** *Appl. Optics*
  De Souza, E., A., Carraresi, L., Boyd, G., D., Miller, D., A. B.
  1994; 33: 1492-1497
- **ESCAPE TUNNELING OUT OF SHALLOW MULTIPLE-QUANTUM WELLS STUDIED BY TRANSIENT 4-WAVE-MIXING** *APPLIED PHYSICS LETTERS*
  VONPLESSEN, G., Feldmann, J., Gobel, E. O., Goossen, K. W., Miller, D. A., Cunningham, J. E.
  1993; 63 (17): 2372-2374
- **WAVELENGTH DEPENDENCE OF SATURATION AND THERMAL EFFECTS IN MULTIPLE-QUANTUM-WELL MODULATORS** *APPLIED PHYSICS LETTERS*
  Boyd, G. D., CAVAILLES, J. A., Chirovsky, L. M., Miller, D. A.
  1993; 63 (13): 1715-1717
- **ANALOG DIFFERENTIAL SELF-LINEARIZED QUANTUM-WELL SELF-ELECTRO-OPTIC-EFFECT MODULATOR** *OPTICS LETTERS*
  DESOUZA, E. A., Carraresi, L., Boyd, G. D., Miller, D. A.
  1993; 18 (12): 974-976
- **INTERLEAVED-CONTACT ELECTROABSORPTION MODULATOR USING DOPING-SELECTIVE ELECTRODES WITH 25-DEGREES-C TO 95-DEGREES-C OPERATING RANGE** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Goossen, K. W., Cunningham, J. E., Jan, W. Y., Miller, D. A.
  1993; 5 (2): 181-183

- **EVOLUTION OF THE SEED TECHNOLOGY - BISTABLE LOGIC GATES TO OPTOELECTRONIC SMART PIXELS** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Lentine, A. L., Miller, D. A.
  1993; 29 (2): 655-669

- **Evolution of the SEED technology: bistable logic gates to optoelectronic smart pixels** *IEEE J. of Quantum Electronics*
  Lentine, A., L., Miller, D., A. B.
  1993; 29: 655-669

- **MONOLITHIC INTEGRATION OF GAAS/ALGAAS MULTIPLE-QUANTUM-WELL MODULATORS AND SILICON METAL-OXIDE-SEMICONDUCTOR TRANSISTORS** *Optical-Society-of-America Topical Meeting on Photonics in Switching*
  Goossen, K. W., Walker, J. A., Cunningham, J. E., Jan, W. Y., Miller, D. A., TEWKSBURY, S. K., Hornak, L. A.
  OPTICAL SOC AMERICA.1993: 94–98

- **Carrier Escape Dynamics In A Single-Quantum-Well Wave-Guide Modulator** *Optical and Quantum Electronics*
  Bambha, R., Hutchings, D., C., Snelling, M., J., Wa, P., Li Kam, Miller, A., Moretti, A., L.
  1993; #12 (25): S965-S971

- **Analog differential self-linearized quantum-well self-electro-optic-effect modulator** *Optics Letters*
  DeSouza, E., A., Carraresi, L., Boyd, G., D., Miller, D., A. B.
  1993; 18: 974-976

- **Wavelength dependence of saturation and thermal effects in multiple quantum well modulators** *Appl. Phys. Lett.*
  Boyd, G., D., Cavailles, J., A., Chirovsky, L., M. F., Miller, D., A. B.
  1993; 63: 1715-1717

- **Novel analog self-electrooptic-effect devices** *IEEE J. of Quantum Electronics*
  Miller, D., A. B.
  1993; 29: 678-698

- **Interleaved-contact electroabsorption modulator using doping-selective electrodes with 25° C to 95° C operating range** *IEEE Photo. Tech. Lett.*
  Goossen, K., W., Cunningham, J., E., Jan, W., Y., Miller, D., A. B.
  1993; 5: 181-183

- **Femtosecond-pulse distortion in quantum wells** *Phys. Rev. B*
  Kim, D., S., Shah, J., Miller, D., A. B., Damen, T., C., Schäfer, W., Pfeiffer, L.
  1993; 48: 902-905

- **Monolithic Integration of GaAs/AlGaAs Multiple Quantum Well Modulators and Silicon Metal-Oxide-Semiconductor Transistors**
  Goossen, K., W., Walker, J., A., Cunningham, J., E., Jan, W., Y., Miller, D., A. B.
  1993

- **THZ PULSES FROM THE CREATION OF POLARIZED ELECTRON-HOLE PAIRS IN BIASED QUANTUM-WELLS** *APPLIED PHYSICS LETTERS*
  Planken, P. C., Nuss, M. C., Knox, W. H., Miller, D. A., Goossen, K. W.
  1992; 61 (17): 2009-2011

- **SIMULTANEOUS MEASUREMENTS OF ELECTRON AND HOLE SWEEP-OUT FROM QUANTUM-WELLS AND MODELING OF PHOTOINDUCED FIELD SCREENING DYNAMICS** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  CAVAILLES, J. A., Miller, D. A., Cunningham, J. E., Wa, P. L., Miller, A.
  1992; 28 (10): 2486-2497

- **SIMULTANEOUS MEASUREMENT OF ELECTRON AND HOLE ESCAPE TIMES FROM BIASED SINGLE QUANTUM-WELLS** *APPLIED PHYSICS LETTERS*
  CAVAILLES, J. A., Miller, D. A., Cunningham, J. E., Wa, P. L., Miller, A.
  1992; 61 (4): 426-428

- **LOGIC SELF-ELECTROOPTIC EFFECT DEVICES - QUANTUM-WELL OPTOELECTRONIC MULTIPORT LOGIC GATES, MULTIPLEXERS, DEMULTIPLEXERS, AND SHIFT REGISTERS** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Lentine, A. L., Tooley, F. A., Walker, S. L., McCormick, F. B., Morrison, R. L., Chirovsky, L. M., Focht, M. W., Freund, J. M., GUTH, G. D., Leibenguth, R. E., Przybylek, G. J., SMITH, L. E., DASARO, et al

1992; 28 (6): 1539-1553

- **COHERENT SUBMILLIMETER-WAVE EMISSION FROM CHARGE OSCILLATIONS IN A DOUBLE-WELL POTENTIAL** *PHYSICAL REVIEW LETTERS*
  Roskos, H. G., Nuss, M. C., Shah, J., Leo, K., Miller, D. A., Fox, A. M., SCHMITTRINK, S., Kohler, K.
  1992; 68 (14): 2216-2219
- **Coherent submillimeter- wave emission from charge oscillations in a double-well potential** *Phys. Rev. Lett.*
  Roskos, H., G., Nuss, M., C., Shah, J., Leo, K., Miller, D., A. B., Fox, A., M.
  1992; 68: 2216-2219
- **FREE-SPACE PHOTONICS IN SWITCHING** *AT&T TECHNICAL JOURNAL*
  Hinton, H. S., Miller, D. A.
  1992; 71 (1): 84-92
- **Optical investigation of Bloch oscillations in a semiconductor superlattice** *Physical Review B*
  Feldmann, J., Leo, K., Shah, J., Miller, D., A. B., Cunningham, J., E., Meier, T.
  1992; 46: 7252-7255
- **Passively mode-locked Nd:YLF and Nd:YAG Lasers using a new intracavity antiresonant semiconductor Fabry-Perot**
  Keller, U., Miller, D., A. B., Boyd, G., D., Chiu, T., H., Ferguson, J., F., Asom, M., T.
  edited by Chase, Lloyd, L., Pinto, Albert, A.
  1992
- **Suppression of the observation of Stark ladders in optical measurements on superlattices by excitonic effects** *Physical Review B*
  Fox, A., M., Miller, D., A. B., Cunningham, J., E., Jan, W., Y., Chao, C., Y. P., Chuang, S., L.
  1992; 46: 15365-15376
- **Simultaneous measurements of electron and hole sweep-out from quantum wells and modeling of photoinduced field screening dynamics** *IEEE J. of Quantum Electronics*
  Cavailles, J., A., Miller, D., A. B., Cunningham, J., E., Wa, P., Li Kam, Miller, A.
  1992; 28: 2486-2497
- **Photonic Switching Based on Free-Space Digital Optics** *Trends in Telecommunications*
  Hinton, H., S., Miller, D., A. B.
  1992; 8: 43-52
- **Logic self-electrooptic effect devices: quantum-well optoelectronic multiplexers, and shift registers** *IEEE J. of Quantum Electronics*
  Lentine, A., L., Tooley, F., A. P., Walker, S., L., McCormick, F., B., Morrison, R., L., Chirovsky, L., M. F., Miller, David, A.B
  1992; 28: 1539-1553
- **Free-Space Photonics in Switching** *AT&T Technical Journal*
  Hinton, H., S., Miller, D., A. B.
  1992: 84-92
- **Simultaneous measurement of electron and hole escape times from biased single quantum wells** *Appl. Phys. Lett.*
  Cavailles, J., A., Miller, D., A. B., Cunningham, J., E., Wa, P., Li Kam, Miller, A.
  1992; 61: 426-428
- **Solid-state low-loss intracavity saturable absorber for Nd:YLF lasers: an antiresonant semiconductor Fabry-Perot saturable absorber** *Optics Letters*
  Keller, U., Miller, D., A. B., Boyd, G., D., Chiu, T., H., Ferguson, J., F., Asom, M., T.
  1992; 17: 505-507
- **OPTIMIZATION OF ABSORPTION IN SYMMETRICAL SELF-ELECTROOPTIC EFFECT DEVICES - A SYSTEMS PERSPECTIVE** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Lentine, A. L., Miller, D. A., Chirovsky, L. M., DASARO, L. A.
  1991; 27 (11): 2431-2439
- **QUANTUM-WELL CARRIER SWEEP OUT - RELATION TO ELECTROABSORPTION AND EXCITON SATURATION** *IEEE JOURNAL OF QUANTUM ELECTRONICS*

Fox, A. M., Miller, D. A., LIVESCU, G., Cunningham, J. E., Jan, W. Y.
1991; 27 (10): 2281-2295

- **EXCITONIC EFFECTS IN COUPLED QUANTUM-WELLS** *PHYSICAL REVIEW B*
  Fox, A. M., Miller, D. A., LIVESCU, G., Cunningham, J. E., Jan, W. Y.
  1991; 44 (12): 6231-6242
- **FAST ESCAPE OF PHOTOCREATED CARRIERS OUT OF SHALLOW QUANTUM-WELLS** *APPLIED PHYSICS LETTERS*
  Feldmann, J., Goossen, K. W., Miller, D. A., Fox, A. M., Cunningham, J. E., Jan, W. Y.
  1991; 59 (1): 66-68
- **EXCITON GREENS-FUNCTION APPROACH TO OPTICAL-ABSORPTION IN A QUANTUM-WELL WITH AN APPLIED ELECTRIC-FIELD** *PHYSICAL REVIEW B*
  Chuang, S. L., SCHMITTRINK, S., Miller, D. A., Chemla, D. S.
  1991; 43 (2): 1500-1509
- **Low Field Electroabsorption and Self-Biased Self-Electrooptics Effect Device Using Slightly Asymmetric Coupled Quantum Wells**
  Goossen, K., W., Cunningham, J., E., Miller, D., A. B., Jan, W., Y., Lentine, A., L., Fox, A., M.
  1991
- **OPTICAL-DETECTION OF RESONANT TUNNELING - MEASUREMENT OF TUNNELING TIMES AND RESONANT FIELDS** *NATO ADVANCED RESEARCH WORKSHOP ON RESONANT TUNNELING IN SEMICONDUCTORS : PHYSICS AND APPLICATIONS*
  LIVESCU, G., Fox, A. M., Miller, D. A.
  PLENUM PRESS DIV PLENUM PUBLISHING CORP.1991: 331–339
- **CARRIER SWEEP-OUT FROM QUANTUM-WELLS IN AN ELECTRIC-FIELD** *4TH TOPICAL MEETING ON PICOSECOND ELECTRONICS AND OPTOELECTRONICS*
  Fox, A. M., Miller, D. A., LIVESCU, G., Cunningham, J. E., Jan, W. Y.
  OPTICAL SOC AMERICA.1991: 210–213
- **INTEGRATED SEED PHOTONIC SWITCHING NODES, MULTIPLEXERS, DEMULTIPLEXERS, AND SHIFT REGISTERS** *INTERNATIONAL TOPICAL MEETING ON PHOTONIC SWITCHING*
  Lentine, A. L., Tooley, F. A., Walker, S. L., McCormick, F. B., Morrison, R. L., Chirovsky, L. M., Focht, M. W., Freund, J. M., GUTH, G. D., Leibenguth, R. E., Przybylek, G. J., SMITH, L. E., DASARO, et al
  OPTICAL SOC AMERICA.1991: 60–66
- **Huygen's wave propagation principle corrected** *Optics Letters*
  Miller, D., A. B.
  1991; 16: 1370-1372
- **Quantum well carrier sweep out: relation to electroabsorption and exciton saturation** *IEEE J. of Quantum Electronics*
  Fox, A., M., Miller, D., A. B., Livescu, G., Cunningham, J., E., Jan, W., Y.
  1991; 27: 2281-2295
- **Excitonic effects in coupled quantum wells** *Physical Review B*
  Fox, A., M., Miller, D., A. B., Livescu, G., Cunningham, J., E., Jan, W., Y.
  1991; 44: 6231-6242
- **Carrier Sweep-Out from Quantum Wells in an Electric Field**
  Fox, A., M., Miller, D., A. B., Livescu, G., Cunningham, J., E., Jan, W., Y.
  1991
- **Optical Detection of Resonant Tunneling: Measurement of Tunneling Times and Resonant Fields** *in Resonant Tunneling in Semiconductors*
  Livescu, G., Fox, A., M., Miller, D., A. B.
  edited by Chang et al., L., L.
  Plenum Press, New York.1991: 331–339
- **Optimization of Absorption in Symmetric Self-Electrooptic Effect Devices: A Systems Perspective** *IEEE J. of Quantum Electronics*
  Lentine, A., L., Miller, D., A. B., Chirovsky, L., M. F., D'Asaro, L., A.
  1991; 27: 2431-2439

- **Fast escape of photocreated carriers out of shallow quantum wells** *Appl. Phys. Lett.*
  Feldmann, J., Goossen, K., W., Miller, D., A. B., Fox, A., M., Cunningham, J., E., Jan, W., Y.
  1991; 59: 66-68

- **Exciton Green's-function approach to optical absorption in a quantum well with an applied electric field** *Physical Review B*
  Chuang, S., L., Scmitt-Rink, S., Miller, D., A. B., Chemla, D., S.
  1991; 43: 1500-1509

- **Electroabsorption in II-VI Multiple Quantum Wells** *Appl. Phys. Lett.*
  Partovi, A., Glass, A., M., Olson, D., H., Feldman, R., D., Austin, R., F., Lee, D., Miller, David, A.B
  1991; 58: 334-336

- **EXCITON SATURATION IN ELECTRICALLY BIASED QUANTUM-WELLS** *APPLIED PHYSICS LETTERS*
  Fox, A. M., Miller, D. A., LIVESCU, G., Cunningham, J. E., Henry, J. E., Jan, W. Y.
  1990; 57 (22): 2315-2317

- **33-PS OPTICAL SWITCHING OF SYMMETRICAL SELF-ELECTRO-OPTIC EFFECT DEVICES** *APPLIED PHYSICS LETTERS*
  Boyd, G. D., Fox, A. M., Miller, D. A., Chirovsky, L. M., DASARO, L. A., Kuo, J. M., Kopf, R. F., Lentine, A. L.
  1990; 57 (18): 1843-1845

- **LOW-ENERGY ULTRAFAST FIBER SOLITON LOGIC GATES** *OPTICS LETTERS*
  Islam, M. N., Soccolich, C. E., Miller, D. A.
  1990; 15 (16): 909-911

- **OPTICAL-DETECTION OF RESONANT TUNNELING OF ELECTRONS IN QUANTUM-WELLS** *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*
  LIVESCU, G., Fox, A. M., Miller, D. A., Sizer, T., Knox, W. H., Cunningham, J. E., Gossard, A. C., English, J. H.
  1990; 5 (6): 549-556

- **PHOTOCURRENT SATURATION IN SHORT-PERIOD SUPERLATTICE MODULATORS** *ELECTRONICS LETTERS*
  Goossen, K. W., Zucker, J. E., Joseph, I. B., Kuo, J. M., KOPF, R. M., Miller, D. A., Chemla, D. S.
  1990; 26 (11): 736-737

- **OPTICAL LOGIC USING ELECTRICALLY CONNECTED QUANTUM-WELL PIN DIODE MODULATORS AND DETECTORS** *TOPICAL MEETING ON OPTICAL COMPUTING*
  Lentine, A. L., Miller, D. A., Henry, J. E., Cunningham, J. E., Chirovsky, L. M., DASARO, L. A.
  OPTICAL SOC AMER.1990: 2153–63

- **ULTRAFAST NONLINEAR OPTICAL EFFECTS IN BIASED SEMICONDUCTOR QUANTUM-WELLS** *PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS*
  Chemla, D. S., SCHMITTRINK, S., Knox, W. H., Miller, D. A., Goossen, K. W., Hasnain, G.
  1990; 159 (1): 11-28

- **QUANTUM-WELL OPTICAL TRISTATE DEVICES** *APPLIED OPTICS*
  Lentine, A. L., Hinterlong, S. J., CLOONAN, T. J., McCormick, F. B., Miller, D. A., Chirovsky, L. M., DASARO, L. A., Kopf, R. F., Kuo, J. M.
  1990; 29 (8): 1157-1160

- **33 ps optical switching of symmetric self-electro-optic effect devices** *Applied Physics Letters*
  Boyd, G., D., Fox, A., M., Miller, D., A. B.
  1990; 57: 1843-1845

- **ULTRAFAST STUDIES OF RESONANT AND NONRESONANT ELECTRON AND HOLE TUNNELING IN QUANTUM-WELL STRUCTURES** *7TH INTERNATIONAL CONF ON ULTRAFAST PHENOMENA*
  Shah, J., Oberli, D. Y., Leo, K., Damen, T. C., Miller, D. A., Gordon, J. P., Cunningham, J. E., Kuo, J. M., Tu, C. W.
  SPRINGER-VERLAG BERLIN.1990: 222–226

- **ULTRAFAST STUDIES OF ELECTRON AND HOLE TUNNELING IN QUANTUM-WELL STRUCTURES** *20TH INTERNATIONAL CONF ON THE PHYSICS OF SEMICONDUCTORS*
  Shah, J., Leo, K., Oberli, D. Y., Damen, T. C., Miller, D. A., Gordon, J. P.
  WORLD SCIENTIFIC PUBL CO PTE LTD.1990: 1222–1225

- **HOLE TUNNELING IN GAAS/ALGAAS HETEROSTRUCTURES - COHERENT VS INCOHERENT RESONANT TUNNELING** *CONF ON QUANTUM-WELL AND SUPERLATTICE PHYSICS 3*
  Leo, K., Shah, J., Gordon, J. P., Damen, T. C., Miller, D. A., Tu, C. W., Cunningham, J. E., Henry, J. E.
  SPIE - INT SOC OPTICAL ENGINEERING.1990: 35–44
- **ULTRAFAST ALL-OPTICAL FIBER SOLITON LOGIC GATES** *7TH INTERNATIONAL CONF ON ULTRAFAST PHENOMENA*
  Islam, M. N., Soccolich, C. E., Miller, D. A.
  SPRINGER-VERLAG BERLIN.1990: 174–178
- **EXCITONS IN RESONANTLY COUPLED QUANTUM-WELLS** *CONF ON QUANTUM-WELL AND SUPERLATTICE PHYSICS 3*
  Fox, A. M., Miller, D. A., LIVESCU, G., Cunningham, J. E., Henry, J. E., Jan, W. Y.
  SPIE - INT SOC OPTICAL ENGINEERING.1990: 164–174
- **HOW FAST IS EXCITONIC ELECTROABSORPTION** *OPTICS LETTERS*
  SCHMITTRINK, S., Chemla, D. S., Knox, W. H., Miller, D. A.
  1990; 15 (1): 60-62
- **PROSPECTS FOR THZ QUANTUM-WELL OPTOELECTRONICS** *CONF ON NONLINEAR OPTICAL MATERIALS AND DEVICES FOR PHOTONIC SWITCHING*
  SCHMITTRINK, S., Chemla, D. S., Goossen, K. W., Knox, W. H., Miller, D. A.
  SPIE - INT SOC OPTICAL ENGINEERING.1990: 53–62
- **Prospects for THz quantum well optoelectronics**
  Schmitt-Rink, S., Chemla, D., S., Goossen, K., W., Knox, W., H., Miller, D., A. B.
  1990
- **Device requirements for digital optical processing** *Digital Optical Computing*
  Miller, D., A. B.
  edited by Athale, R., A.
  SPIE Critical Reviews of Optical Science and Technology.1990: 68–76
- **Comment on 'Optical bistability in self-electro-optic effect devices with asymmetric quantum wells' and on 'Novel configuration of self-electro-optic effect device based on asymmetric quantum wells'** *Applied Physics Letters*
  Miller, D., A. B.
  1990; 57: 1363-1365
- **Low-Energy ultrafast fiber soliton logic gates** *Optics Letters*
  Islam, M., N., Soccolich, C., E., Miller, D., A. B.
  1990; 90: 909-911
- **Observation of Room-Temperature Blue Shift and Bistability in a Strained InGaAs-GaAs (111) Self-Electro-Optic Effect Device** *Applied Physics Letters*
  Goossen, K., W., Caridi, E., A., Chang, T., Y., Stark, J., B., Miller, D., A. B., Morgan, R., A.
  1990; 56: 715-717
- **Quantum Well Devices for Optics in Digital Systems**
  Miller, D., A. B.
  1990
- **Ultrafast Nonlinear Optical Effects in Biased Semiconductor Quantum Wells** *phys. stat. sol. (b)*
  Chemla, D., S., Schmitt-Rink, S., Knox, W., H., Miller, D., A. B., Goossen, K., W., Hasnain, G.
  1990; 159: 11
- **Quantum-well self-electro-optic effect devices** *Optical and Quantum Electronics*
  Miller, D., A. B.
  1990; 22: S61-S98
- **Quantum Well Optoelectronic Switching Devices** *International J. of High Speed Electronics*
  Miller, D., A. B.
  1990; 1: 19-46

- **Quantum well optical tri-state devices** *Applied Optics*
  Lentine, A., L., Hinterlong, S., J., Cloonan, T., J., McCormick, F., B., Miller, D., A. B., Chirovsky, L., M. F.
  1990; 29: 1157-1160

- **Optoelectronic applications of quantum wells** *Optics & Photonics News*
  Miller, D., A. B.
  1990; 1 (2): 7-15

- **Nonlinear Optical Properties of GaAs/(AlGa)As Multiple Quantum Well Structures under Quasistationary High Excitation Conditions** *physica status solidi (b)*
  Schlaad, K., H., Weber, Ch., Chemla, D., S., Cunningham, J., E., Miller, D., A. B., Hoof, C., V.
  1990; 159: 173-180

- **Excitons in Resonantly Coupled Quantum Wells** *SPIE 1283 Quantum-Well and Superlattice Physics III*
  Fox, A., M., Miller, D., A. B., Livescu, G., Cunningham, J., E., Henry, J., E., Jan, W., Y.
  1990: 164-174

- **Excitons in resonant coupling of quantum wells** *Physical Review B*
  Fox, A., M., Miller, D., A. B., Livescu, G., Cunningham, J., E., Henry, J., E., Jan, W., Y.
  1990; 42: 1841-1844

- **Exciton saturation in electrically biased quantum wells** *Applied Physics Letters*
  Fox, A., M., Miller, D., A. B., Livescu, G., Cunningham, J., E., Henry, J., E., Jan, W., Y.
  1990; 57: 2315-2317

- **Effect of collisions and relaxation on coherent resonant tunneling: Hole tunneling in GaAs/Al x Ga 1-x As double- quantum-well structures** *Physical Review B*
  Leo, K., Shah, J., Gordon, J., P., Damen, T., C., Miller, D., A. B., Tu, C., W.
  1990; 11 (42): 7065-7068

- **Optical logic using electrically connected quantum well PIN diode modulators and detectors** *Applied Optics*
  Lentine, A., L., Miller, D., A. B., Henry, J., E., Cunningham, J., E., Chirovsky, L., M. F., D'Asaro, L., A.
  1990; 29: 2153-2163

- **How fast is excitonic electroabsorption?** *Optics Letters*
  Schmitt-Rink, S., Chemla, D., S., Knox, W., H., Miller, D., A. B.
  1990; 15: 60-62

- **THE EXCITONIC OPTICAL STARK-EFFECT IN SEMICONDUCTOR QUANTUM WELLS PROBED WITH FEMTOSECOND OPTICAL PULSES** *JOURNAL OF LUMINESCENCE*
  Chemla, D. S., Knox, W. H., Miller, D. A., SCHMITTRINK, S., Stark, J. B., Zimmermann, R.
  1989; 44 (4-6): 233-246

- **FEMTOSECOND EXCITONIC OPTOELECTRONICS** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Knox, W. H., Henry, J. E., Goossen, K. W., Li, K. D., Tell, B., Miller, D. A., Chemla, D. S., Gossard, A. C., English, J., SCHMITTRINK, S.
  1989; 25 (12): 2586-2595

- **GAAS-ALGAAS MULTIQUANTUM WELL REFLECTION MODULATORS GROWN ON GAAS AND SILICON SUBSTRATES** *IEEE PHOTONICS TECHNOLOGY LETTERS*
  Goossen, K. W., Boyd, G. D., Cunningham, J. E., Jan, W. Y., Miller, D. A., Chemla, D. S., Lum, R. M.
  1989; 1 (10): 304-306

- **MULTISTATE SELF-ELECTROOPTIC EFFECT DEVICES** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Lentine, A. L., Miller, D. A., Henry, J. E., Cunningham, J. E., Chirovsky, L. M.
  1989; 25 (8): 1921-1927

- **SYMMETRIC SELF-ELECTROOPTIC EFFECT DEVICE - OPTICAL SET-RESET LATCH, DIFFERENTIAL LOGIC GATE, AND DIFFERENTIAL MODULATOR DETECTOR** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Lentine, A. L., Hinton, H. S., Miller, D. A., Henry, J. E., Cunningham, J. E., Chirovsky, L. M.
  1989; 25 (8): 1928-1936

- **ROOM-TEMPERATURE ELECTROABSORPTION AND SWITCHING IN A GAAS/ALGAAS SUPERLATTICE** *APPLIED PHYSICS LETTERS*
  BARJOSEPH, I., Goossen, K. W., Kuo, J. M., Kopf, R. F., Miller, D. A., Chemla, D. S.
  1989; 55 (4): 340-342

- **RESONANTLY ENHANCED ELECTRON-TUNNELING RATES IN QUANTUM WELLS** *PHYSICAL REVIEW LETTERS*
  LIVESCU, G., Fox, A. M., Miller, D. A., Sizer, T., Knox, W. H., Gossard, A. C., English, J. H.
  1989; 63 (4): 438-441

- **5.5 GHZ MULTIPLE QUANTUM WELL REFLECTION MODULATOR** *ELECTRONICS LETTERS*
  Boyd, G. D., Bowers, J. E., Soccolich, C. E., Miller, D. A., Chemla, D. S., Chirovsky, L. M., Gossard, A. C., English, J. H.
  1989; 25 (9): 558-560

- **FEMTOSECOND AC STARK-EFFECT IN SEMICONDUCTOR QUANTUM WELLS - EXTREME LOW-INTENSITY AND HIGH-INTENSITY LIMITS** *PHYSICAL REVIEW LETTERS*
  Knox, W. H., Chemla, D. S., Miller, D. A., Stark, J. B., SCHMITTRINK, S.
  1989; 62 (10): 1189-1192

- **LINEAR AND NONLINEAR OPTICAL-PROPERTIES OF SEMICONDUCTOR QUANTUM WELLS** *ADVANCES IN PHYSICS*
  SCHMITTRINK, S., Chemla, D. S., Miller, D. A.
  1989; 38 (2): 89-188

- **HIGH-SPEED ABSORPTION RECOVERY IN QUANTUM WELL DIODES BY DIFFUSIVE ELECTRICAL-CONDUCTION** *APPLIED PHYSICS LETTERS*
  LIVESCU, G., Miller, D. A., Sizer, T., BURROWS, D. J., Cunningham, J. E., Gossard, A. C., English, J. H.
  1989; 54 (8): 748-750

- **Femtosecond ac Stark Effect in Semiconductor Quantum Wells: Extreme Low- and High-Intensity Limits** *Phys. Rev. Lett.*
  Knox, W., H., Chemla, D., S., Miller, D., A. B.
  1989; 62: 1189-1192

- **NONALLOYED AL OHMIC CONTACT TO GAAS FOR GAAS/SI INTERCONNECT COMPATIBILITY** *1989 INTERNATIONAL ELECTRON DEVICES MEETING*
  Goossen, K. W., Cunningham, J. E., Chiu, T. H., Miller, D. A., Chemla, D. S.
  I E E E, ELECTRON DEVICES SOC & RELIABILITY GROUP.1989: 409–410

- **GaAs-AlGaAs Multiquantum Well Reflection Modulators Grown on GaAs and Silicon Substrates** *IEEE Photonics Tech. Lett.*
  Goossen, K., W., Boyd, G., D., Cunningham, J., E., Jan, W., Y., Miller, D., A. B., Chemla, D., S.
  1989; 1: 304-306

- **Linear and nonlinear optical properties of semiconductor quantum wells** *Adv. Phys.*
  Schmitt-Rink, S., Chemla, D., S., Miller, D., A. B.
  1989; 38: 89-188

- **Femtosecond Excitonic Optoelectronics** *IEEE J. of Quantum Electronics*
  Knox, W., H., Henry, J., E., Goossen, K., W., Li, K., D., Tell, B., Miller, D., A. B.
  1989; 24: 2586-2595

- **Room-temperature electroabsorption and switching in a GaAs/AlGaAs superlattice** *Appl. Phys. Lett.*
  Bar-Joseph, I., Goossen, K., W., Kuo, J., M., Kopf, R., F., Miller, D., A. B., Chemla, D., S.
  1989; 55: 340-342

- **High-speed absorption recovery in quantum well diodes by diffusive electrical conduction** *Appl. Phys. Lett.*
  Livescu, G., Miller, D., A. B., Sizer, T., Burrows, D., J., Cunningham, J., Gossard, A., C.
  1989; 54: 748-750

- **Field-effect transistor self-electrooptic effect device: integrated photodiode, quantum well modulator and transistor** *IEEE Photonics Tech. Lett.*
  Miller, D., A. B., Feuer, M., D., Chang, T., Y., Shunk, S., C., Henry, J., E., Burrows, D., J.
  1989; 1: 61-64

- **Physics and applications of quantum wells in optics**
  Miller, D., A. B.
  1989
- **Digital Optics**
  Streibl, N., Brenner, K., H., Huang, A., Jahns, J., Jewell, J., Lohmann, A., W., Miller, David, A.B
  1989
- **Batch-Fabricated Symmetric Self-Electro-Optic Effect Devices**
  Chirovsky, L., M. F., D'Asaro, L., A., Tu, C., W., Lentine, A., L., Boyd, G., D., Miller, D., A. B.
  edited by Midwinter, J., E., Hinton, H., S.
  1989
- **The Excitonic Optical Stark Effect in Semiconductor Quantum Wells Probed With Femtosecond Optical Pulses** *Journal of Luminescence*
  Chemla, D., S., Knox, W., H., Miller, D., A. B., Schmitt-Rink, S., Stark, J., B., Zimmermann, R.
  1989; 44: 233-246
- **Symmetric Self-Electrooptic Effect Device: Optical Set-Reset Latch, Differential Logic Gate, and Differential Modulator/Detector** *IEEE J. of Quantum Electronics*
  Lentine, A., L., Hinton, H., S., Miller, D., A. B., Henry, J., E., Cunningham, J., E., Chirovsky, L., M. F.
  1989; 25: 1928-1936
- **Optics for low-energy communication inside digital processors: quantum detectors, sources, and modulators as efficient impedance converters** *Optics Letters*
  Miller, D., A. B.
  1989; 14: 146-148
- **Optical detection of resonant tunneling of electrons in quantum wells** *Semiconductor Sci. Technology*
  Livescu, G., Fox, A., M., Sizer, T., Knox, W., H., Cunningham, J., E., Gossard, A., C.
  1989; 5: 549-556
- **Multistate Self-Electrooptic Effect Devices** *IEEE J. of Quantum Electronics*
  Lentine, A., L., Miller, D., A. B., Henry, J., E., Cunningham, J., E., Chirovsky, L., M. F.
  1989; 25: 1921-1927
- **Direct measurement of resonant and nonresonant tunneling times in asymmetric coupled quantum wells** *Phys. Rev. B.*
  Oberli, D., Y., Shah, J., Damen, T., C., Tu, C., W., Chang, T., Y., Miller, D., A. B.
  1989; 40: 3028-3031
- **5.5 GHz Multiple Quantum Well Reflection Modulator** *Electronics Lett.*
  Boyd, G., D., Bowers, J., E., Soccolich, C., E., Miller, D., A. B., Chemla, D., S., Chirovsky, L., M. F.
  1989; 25: 558-560
- **Energy scaling and subnanosecond switching of symmetric self-electrooptic effect devices** *IEEE Photonics Tech. Lett.*
  Lentine, A., L., Chirovsky, L., M. F., D'Asaro, L., A., Tu, C., W., Miller, D., A. B.
  1989; 1: 129-131
- **Resonantly Enhanced Electron Tunneling Rates in Quantum Wells** *Phys. Rev. Lett.*
  Livescu, G., Fox, A., M., Miller, D., A. B., Sizer, T., Knox, W., H.
  1989; 63: 438-441
- **MODULATION OF ABSORPTION IN FIELD-EFFECT QUANTUM WELL STRUCTURES** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Chemla, D. S., BARJOSEPH, I., Kuo, J. M., Chang, T. Y., Klingshirn, C., LIVESCU, G., Miller, D. A.
  1988; 24 (8): 1664-1676
- **FREE CARRIER AND MANY-BODY EFFECTS IN ABSORPTION-SPECTRA OF MODULATION-DOPED QUANTUM WELLS** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  LIVESCU, G., Miller, D. A., Chemla, D. S., Ramaswamy, M., Chang, T. Y., Sauer, N., Gossard, A. C., English, J. H.
  1988; 24 (8): 1677-1689

- **ELECTROABSORPTION OF HIGHLY CONFINED SYSTEMS - THEORY OF THE QUANTUM-CONFINED FRANZ-KELDYSH EFFECT IN SEMICONDUCTOR QUANTUM WIRES AND DOTS** *APPLIED PHYSICS LETTERS*
  Miller, D. A., Chemla, D. S., SCHMITTRINK, S.
  1988; 52 (25): 2154-2156

- **SYMMETRIC SELF-ELECTRO-OPTIC EFFECT DEVICE - OPTICAL SET-RESET LATCH** *APPLIED PHYSICS LETTERS*
  Lentine, A. L., Hinton, H. S., Miller, D. A., Henry, J. E., Cunningham, J. E., Chirovsky, L. M.
  1988; 52 (17): 1419-1421

- **SPATIAL LIGHT-MODULATOR AND OPTICAL-DYNAMIC MEMORY USING A 6X6 ARRAY OF SELF-ELECTRO-OPTIC-EFFECT DEVICES** *OPTICS LETTERS*
  LIVESCU, G., Miller, D. A., Henry, J. E., Gossard, A. C., English, J. H.
  1988; 13 (4): 297-299

- **SELF-ELECTRO-OPTIC EFFECT DEVICE AND MODULATION CONVERTER WITH INGAAS/INP MULTIPLE QUANTUM WELLS** *APPLIED PHYSICS LETTERS*
  BARJOSEPH, I., Sucha, G., Miller, D. A., Chemla, D. S., Miller, B. I., Koren, U.
  1988; 52 (1): 51-53

- **Free carrier and many-body effects in absorption spectra of modulation-doped quantum wells** *IEEE J. Quantum Electron.*
  Livescu, G., Miller, D., A. B., Chemla, D., S., Ramaswamy, M., Chang, T., Y., Sauer, N.
  1988; 24: 1677-1689

- **ELECTRON-HOLE CORRELATION SINGULARITY IN OPTICAL-SPECTRA OF MODULATION DOPED GAAS-ALGAAS QUANTUM WELLS** *SUPERLATTICES AND MICROSTRUCTURES*
  LIVESCU, G., Miller, D. A., Chemla, D. S.
  1988; 4 (3): 359-361

- **Properties of the electron-hole plasma in GaAs/GaAlAs multiple quantum wells**
  Weber, C., Klingshirn, C., Chemla, D., S., Miller, D., A. B., Cunningham, J., Ell, C.
  edited by Zawadski, W.
  1988

- **Gain measurement and band-gap renormalization in GaAs/Alx Ga1-xAs multiple-quantum-well structures** *Phys. Rev. B*
  Weber, C., Klingshirn, C., Chemla, D., S., Miller, D., A. B., Cunningham, J., E.
  1988; 38: 12748-12751

- **Optical Switching Devices: Some Basic Concepts, Optical Computing**
  Miller, D., A. B.
  edited by Wherrett, B., S., Tooley, F., A. P.
  1988

- **Modulation of absorption in field-effect quantum well structures** *IEEE J. Quantum Electron.*
  Chemla, D., S., Bar-Joseph, I., Kuo, J., M., Chang, T., Y., Klingshirn, C., Livescu, G., Miller, David, A.B
  1988; 24: 1664-1676

- **Quantum Well Electroabsorptive Devices: Physics and Applications, Optical Computing**
  Miller, D., A. B.
  edited by Wherrett, B., S., Tooley, F., A. P.
  1988

- **Photo-electronic optical nonlinearities in three - and quasi two - dimensional semiconductors, Nonlinear Optical Materials**
  Klingshirn, C., Weber, C., Swoboda, H., E., Renner, R., Majumder, F., A., Kunz, M.
  1988

- **Integrated quantum well modulator, field effect transistor, and optical detector**
  Miller, D., A. B., Feuer, M., D., Chang, T., Y., Shunk, S., C., Henry, J., E., Burrows, D., J.
  1988

- **Integrated Quantum Well Switching Devices** *Optical Switching in Low Dimensional Systems*

Miller, D., A. B.
Plenum Press, New York and London.1988: 1–8

- **Electric field dependence of optical properties of semiconductor quantum wells: physics and applications** *Nonlinear Optical Properties of Semiconductors*
  Miller, D., A. B., Chemla, D., S., Schmitt-Rink, S.
  edited by Haug, H.
  Academic Press, San Diego.1988: 325–359
- **Nonlinear Optical Properties of Semiconductor Quantum Wells** *Nonlinear Optical Properties of Semiconductors*
  Chemla, D., S., Miller, D., A. B., Schmitt-Rink, S.
  edited by Haug, H.
  Academic Press, San Diego.1988: 83–120
- **Symmetric self-electro-optic effect device: Optical set-reset latch** *Appl. Phys. Lett.*
  Lentine, A., L., Hinton, H., S., Miller, D., A. B., Henry, J., E., Cunningham, J., E., Chirovsky, L., M. F.
  1988; 52: 1419-1421
- **Spatial light modulator and optical dynamic memory using a 6 x 6 array of self-electro-optic-effect devices** *Optics Letters*
  Livescu, G., Miller, D., A. B., Henry, J., E., Gossard, A., C., English, J., H.
  1988; 13: 297-299
- **Optical bistability in self-electro-optic effect devices with asymmetric quantum wells** *Appl. Phys. Lett.*
  Miller, D., A. B.
  1988; 54: 202-204
- **Electron-hole correlation singularity in optical spectra of modulation doped GaAs-AlGaAs quantum wells** *Superlattices and Microstructures*
  Livescu, G., Miller, D., A. B., Chemla, D., S.
  1988; 4: 359-361
- **Electroabsorption of highly confined systems: Theory of the quantum-confined Franz-Keldysh effect in semiconductor quantum wires and dots** *Appl. Phys. Lett.*
  Miller, D., A. B., Chemla, D., S., Schmitt-Rink, S.
  1988; 52: 2154-2156
- **All-optical regenerator** *Electronics Lett.*
  Giles, C., R., Li, T., Wood, T., H., Burrus, C., A., Miller, D., A. B.
  1988; 4: 848-850
- **Self-electrooptic effect device and modulation converter with InGaAs/InP multiple quantum wells** *Appl. Phys. Lett.*
  Bar-Joseph, I., Sucha, G., Miller, D., A. B., Chemla, D., S., Miller, B., I., Koren, U.
  1988; 52: 51-53
- **ABSORPTION-SPECTROSCOPY OF THE CONTINUOUS TRANSITION FROM LOW TO HIGH ELECTRON-DENSITY IN A SINGLE MODULATION-DOPED INGAAS QUANTUM-WELL** *PHYSICAL REVIEW LETTERS*
  Joseph, I. B., Kuo, J. M., Klingshirn, C., LIVESCU, G., Chang, T. Y., Miller, D. A., Chemla, D. S.
  1987; 59 (12): 1357-1360
- **GENERATION OF ULTRASHORT ELECTRICAL PULSES THROUGH SCREENING BY VIRTUAL POPULATIONS IN BIASED QUANTUM-WELLS** *PHYSICAL REVIEW LETTERS*
  Chemla, D. S., Miller, D. A., SCHMITTRINK, S.
  1987; 59 (9): 1018-1021
- **HIGH-FREQUENCY INGAAS/INP MULTIPLE-QUANTUM-WELL BURIED-MESA ELECTROABSORPTION OPTICAL MODULATOR** *ELECTRONICS LETTERS*
  Koren, U., Miller, B. I., Tucker, R. S., Eisenstein, G., BARJOSEPH, I., Miller, D. A., Chemla, D. S.
  1987; 23 (12): 621-622
- **THEORY OF THE LINEAR AND NONLINEAR OPTICAL-PROPERTIES OF SEMICONDUCTOR MICROCRYSTALLITES** *PHYSICAL REVIEW B*
  SCHMITTRINK, S., Miller, D. A., Chemla, D. S.

1987; 35 (15): 8113-8125

- **MULTIPLE QUANTUM-WELL REFLECTION MODULATOR** *APPLIED PHYSICS LETTERS*
  Boyd, G. D., Miller, D. A., Chemla, D. S., MCCALL, S. L., Gossard, A. C., English, J. H.
  1987; 50 (17): 1119-1121
- **ELECTROABSORPTION IN GAAS/ALGAAS COUPLED QUANTUM-WELL WAVE-GUIDES** *APPLIED PHYSICS LETTERS*
  Islam, M. N., Hillman, R. L., Miller, D. A., Chemla, D. S., Gossard, A. C., English, J. H.
  1987; 50 (16): 1098-1100
- **QUANTUM-CONFINED STARK-EFFECT IN INGAAS INP QUANTUM-WELLS GROWN BY ORGANOMETALLIC VAPOR-PHASE EPITAXY** *APPLIED PHYSICS LETTERS*
  BARJOSEPH, I., Klingshirn, C., Miller, D. A., Chemla, D. S., Koren, U., Miller, B. I.
  1987; 50 (15): 1010-1012
- **QUADRATIC ELECTROOPTIC EFFECT DUE TO THE QUANTUM-CONFINED STARK-EFFECT IN QUANTUM-WELLS** *APPLIED PHYSICS LETTERS*
  Weiner, J. S., Miller, D. A., Chemla, D. S.
  1987; 50 (13): 842-844
- **OPTICAL READING OF FIELD-EFFECT TRANSISTORS BY PHASE-SPACE ABSORPTION QUENCHING IN A SINGLE INGAAS QUANTUM-WELL CONDUCTING CHANNEL** *APPLIED PHYSICS LETTERS*
  Chemla, D. S., BARJOSEPH, I., Klingshirn, C., Miller, D. A., Kuo, J. M., Chang, T. Y.
  1987; 50 (10): 585-587
- **LOW-VOLTAGE MODULATOR AND SELF-BIASED SELF-ELECTRO-OPTIC-EFFECT DEVICE** *ELECTRONICS LETTERS*
  Weiner, J. S., Gossard, A. C., English, J. H., Miller, D. A., Chemla, D. S., Burrus, C. A.
  1987; 23 (2): 75-77
- **Low Voltage Modulator and Self-Biased Self-Electro-Optic Effect Device** *Electronics Lett.*
  Weiner, J., S., Gossard, A., C., English, J., H., Miller, D., A. B., Chemla, D., S., Burrus, C., A.
  1987; 23: 75-77
- **High-Frequency InGaAs/InP Multiple-Quantum-Well Buried-Mesa Electroabsorption Optical Modulator** *Electronics Letters*
  Koren, U., Miller, B., I., Tucker, R., S., Eisenstein, G., Bar-Joseph, I., Miller, D., A. B.
  1987; 23: 621-622
- **Electroabsorption in GaAs/AlGaAs Coupled Quantum Well Waveguides** *Appl. Phys. Lett.*
  Islam, M., N., Hillman, R., L., Miller, D., A. B., Chemla, D., S., Gossard, A., C., English, J., H.
  1987; 50: 1098-1100
- **Theory of the Linear and Nonlinear Optical Properties of Semiconductor Microcrystallites** *Phys. Rev. B*
  Schmitt-Rink, S., Miller, D., A. B., Chemla, D., S.
  1987; 35: 8113-8125
- **Optical Reading of Field-Effect Transistors by Phase-Space Absorption Quenching in a Single InGaAs Quantum Well Conducting Channel** *Appl. Phys. Lett.*
  Chemla, D., S., Bar-Joseph, I., Klingshirn, C., Miller, D., A. B., Kuo, J., M., Chang, T., Y.
  1987; 50: 585-587
- **Electric Field Dependence of Optical Absorption in Quantum Well Structures: Physics and Applications,Quantum Well and Superlattice Physics**
  Miller, D., A. B.
  1987
- **Quantum-Confined Stark Effect in InGaAs/InP Quantum Wells Grown by Organometallic Vapor Phase Epitaxy** *Appl. Phys. Lett.*
  Bar-Joseph, I., Klingshirn, C., Miller, D., A. B., Chemla, D., S., Koren, U., Miller, B., I.
  1987; 50: 1010-1012
- **Quantum Wells for Optical Information Processing** *Opt. Eng.*
  Miller, D., A. B.

1987; 26: 368-372

- **Generation of Ultrashort Electrical Pulses through Screening by Virtual Populations in Biased Quantum Wells** *Phys. Rev. Lett.*
  Chemla, D., S., Miller, D., A. B., Schmitt-Rink, S.
  1987; 59: 1018-1021

- **Absorption Spectroscopy of the Continuous Transition from Low to High Electron Density in a Single Modulation Doped InGaAs Quantum Well** *Phys. Rev. Lett.*
  Bar-Joseph, I., Kuo, J., M., Klingshirn, C., Livescu, G., Miller, D., A. B., Chang, T., Y.
  1987; 59: 1357-1360

- **Quadratic Electro-Optic Effect due to the Quantum-Confined Stark Effect in Quantum Wells** *Appl. Phys. Lett.*
  Weiner, J., S., Miller, D., A. B., Chemla, D., S.
  1987; 50: 842-844

- **Multiple Quantum Well Reflection Modulator** *Appl. Phys. Lett.*
  Boyd, G., D., Miller, D., A. B., Chemla, D., S., McCall, S., L., Gossard, A., C., English, J., H.
  1987; 50: 1119-1121

- **INTEGRATED QUANTUM-WELL SELF-ELECTRO-OPTIC EFFECT DEVICE - 2X2 ARRAY OF OPTICALLY BISTABLE SWITCHES** *APPLIED PHYSICS LETTERS*
  Miller, D. A., Henry, J. E., Gossard, A. C., English, J. H.
  1986; 49 (13): 821-823

- **ELECTRIC-FIELD DEPENDENCE OF LINEAR OPTICAL-PROPERTIES IN QUANTUM-WELL STRUCTURES - WAVE-GUIDE ELECTROABSORPTION AND SUM-RULES** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Miller, D. A., Weiner, J. S., Chemla, D. S.
  1986; 22 (9): 1816-1830

- **MECHANISM FOR ENHANCED OPTICAL NONLINEARITIES AND BISTABILITY BY COMBINED DIELECTRIC ELECTRONIC CONFINEMENT IN SEMICONDUCTOR MICROCRYSTALLITES** *OPTICS LETTERS*
  Chemla, D. S., Miller, D. A.
  1986; 11 (8): 522-524

- **RELATION BETWEEN ELECTROABSORPTION IN BULK SEMICONDUCTORS AND IN QUANTUM-WELLS - THE QUANTUM-CONFINED FRANZ-KELDYSH EFFECT** *PHYSICAL REVIEW B*
  Miller, D. A., Chemla, D. S., SCHMITTRINK, S.
  1986; 33 (10): 6976-6982

- **SUBPICOSECOND EXCITONIC ELECTROABSORPTION IN ROOM-TEMPERATURE QUANTUM-WELLS** *APPLIED PHYSICS LETTERS*
  Knox, W. H., Miller, D. A., Damen, T. C., Chemla, D. S., Shank, C. V., Gossard, A. C.
  1986; 48 (13): 864-866

- **Novel Optical Modulators and Bistable Devices Using the Self-Electro-Optic Effect in Semiconductor Quantum Wells** *Surface Science*
  Miller, D., A. B.
  1986; 174: 221-232

- **Relation Between Electroabsorption in Bulk Semiconductors and in Quantum Wells: The Quantum-Confined Franz-Keldysh Effect** *Phys. Rev. B*
  Miller, D., A. B., Chemla, D., S., Schmitt-Rink, S.
  1986; 33: 6976-6982

- **Electric Field Dependence of Linear Optical Properties in Quantum Well Structures: Waveguide Electroabsorption and Sum Rules** *IEEE J. Quantum Electron.*
  Miller, D., A. B., Weiner, J., S., Chemla, D., S.
  1986; QE-22: 1816-1830

- **Electric Field Dependence of Optical Properties of Quantum Well Structures, Electro-optic and Photorefractive Materials**
  Miller, D., A. B.
  edited by Gunter, P.
  1986

- **Subpicosecond Excitonic Electroabsorption in Room-Temperature Quantum Wells** *Appl. Phys. Lett.*
  Knox, W., H., Miller, D., A. B., Damen, T., C., Chemla, D., S., Shank, C., V., Gossard, A., C.
  1986; 48: 864-866
- **Nonlinear Spectroscopy of InGaAs/InAlAs Multiple Quantum Well Structures** *Appl. Phys. Lett.*
  Weiner, J., S., Pearson, D., B., Miller, D., A. B., Chemla, D., S., Sivco, D., Cho, A., Y.
  1986; 49: 531-533
- **Mechanism for Enhanced Optical Nonlinearities and Bistability by Combined Dielectric-Electronic Confinement in Semiconductor Microcrystallites** *Optics Lett.*
  Chemla, D., S., Miller, D., A. B.
  1986; 11: 522-524
- **Integrated Quantum Well Self-Electro-Optic Effect Device: 2x2 Array of Optically Bistable Switches** *Appl. Phys. Lett.*
  Miller, D., A. B., Henry, J., E., Gossard, A., C., English, J., H.
  1986; 49: 821-823
- **Femtosecond Excitation of Nonthermal Carrier Populations in GaAs Quantum Wells** *Phys. Rev. Lett.*
  Knox, W., H., Hirlimann, C., Miller, D., A. B., Shah, J., Chemla, D., S., Shank, C., V.
  1986; 56: 1191-1193
- **Attenuation of Cutoff Modes and Leaky Modes of Dielectric Slab Structures** *IEEE J. Quantum Electron*
  Haus, H., A., Miller, D., A. B.
  1986; QE-22: 310-324
- **Electric Field Dependence of Optical Absorption near the Bandgap of Quantum Well Structures** *Phys. Rev. B*
  Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C., Wiegmann, W., Wood, T., H.
  1985; 32: 1043-1060
- **HIGHLY ANISOTROPIC OPTICAL-PROPERTIES OF SINGLE QUANTUM WELL WAVE-GUIDES** *APPLIED PHYSICS LETTERS*
  Weiner, J. S., Chemla, D. S., Miller, D. A., Haus, H. A., Gossard, A. C., WIEGMANN, W., Burrus, C. A.
  1985; 47 (7): 664-667
- **THE QUANTUM WELL SELF-ELECTROOPTIC EFFECT DEVICE - OPTOELECTRONIC BISTABILITY AND OSCILLATION, AND SELF-LINEARIZED MODULATION** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Miller, D. A., Chemla, D. S., Damen, T. C., Wood, T. H., Burrus, C. A., Gossard, A. C., WIEGMANN, W.
  1985; 21 (9): 1462-1476
- **FAST NONLINEAR OPTICAL-RESPONSE FROM PROTON-BOMBARDED MULTIPLE QUANTUM WELL STRUCTURES** *APPLIED PHYSICS LETTERS*
  Silberberg, Y., Smith, P. W., Miller, D. A., Tell, B., Gossard, A. C., WIEGMANN, W.
  1985; 46 (8): 701-703
- **FEMTOSECOND DYNAMICS OF RESONANTLY EXCITED EXCITONS IN ROOM-TEMPERATURE GAAS QUANTUM WELLS** *PHYSICAL REVIEW LETTERS*
  Knox, W. H., Fork, R. L., Downer, M. C., Miller, D. A., Chemla, D. S., Shank, C. V., Gossard, A. C., WIEGMANN, W.
  1985; 54 (12): 1306-1309
- **ELECTRIC-FIELD DEPENDENCE OF OPTICAL-ABSORPTION NEAR THE BAND-GAP OF QUANTUM-WELL STRUCTURES** *PHYSICAL REVIEW B*
  Miller, D. A., Chemla, D. S., Damen, T. C., Gossard, A. C., WIEGMANN, W., Wood, T. H., Burrus, C. A.
  1985; 32 (2): 1043-1060
- **STRONG POLARIZATION-SENSITIVE ELECTROABSORPTION IN GAAS/ALGAAS QUANTUM WELL WAVE-GUIDES** *APPLIED PHYSICS LETTERS*
  Weiner, J. S., Miller, D. A., Chemla, D. S., Damen, T. C., Burrus, C. A., Wood, T. H., Gossard, A. C., WIEGMANN, W.
  1985; 47 (11): 1148-1150
- **100 PS WAVE-GUIDE MULTIPLE QUANTUM WELL (MQW) OPTICAL MODULATOR WITH 10-1 ON OFF RATIO** *ELECTRONICS LETTERS*
  Wood, T. H., Burrus, C. A., Tucker, R. S., Weiner, J. S., Miller, D. A., Chemla, D. S., Damen, T. C., Gossard, A. C., WIEGMANN, W.

1985; 21 (16): 693-694

- **ROOM-TEMPERATURE EXCITONIC NONLINEAR-OPTICAL EFFECTS IN SEMICONDUCTOR QUANTUM-WELL STRUCTURES** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS*
  Chemla, D. S., Miller, D. A.
  1985; 2 (7): 1155-1173
- **THEORY OF TRANSIENT EXCITONIC OPTICAL NONLINEARITIES IN SEMICONDUCTOR QUANTUM-WELL STRUCTURES** *PHYSICAL REVIEW B*
  SCHMITTRINK, S., Chemla, D. S., Miller, D. A.
  1985; 32 (10): 6601-6609
- **NONLINEAR OPTICAL-PROPERTIES OF GAAS/GAAIAS MULTIPLE QUANTUM WELL MATERIAL - PHENOMENA AND APPLICATIONS** *OPTICAL ENGINEERING*
  Chemla, D. S., Miller, D. A., Smith, P. W.
  1985; 24 (4): 556-564
- **Wavelength-Selective Voltage-Tunable Photodetector Made from Multiple Quantum Wells** *Appl. Phys. Lett.*
  Wood, T., H., Burrus, C., A., Gnauck, A., H., Wiesenfeld, J., M., Miller, D., A. B., Chemla, D., S.
  1985; 47: 190-192
- **Nonlinear Optical Properties of GaAs/GaAlAs Multiple Quantum Well Material: Phenomena and Applications.** *Opt. Eng.*
  Chemla, D., S., Miller, D., A. B., Smith, P., W.
  1985; 24: 556-564
- **Strong Polarization Sensitive Electroabsorption in GaAs/AlGaAs Quantum Well Waveguides** *J. Opt. Soc. Am. A*
  Weiner, J., S., Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C., Wiegmann, W.
  1985; 2: 44
- **Room-Temperature Excitonic Nonlinear-Optical Effects in Semiconductor Quantum-Well Structures** *J. Opt. Soc. Am. B*
  Chemla, D., S., Miller, D., A. B.
  1985; 2: 1155-1173
- **Multiple Quantum Well Optical Nonlinearities: Bistability from Increasing Absorption and the Self Electro-Optic Device** *Phil. Trans. R. Soc. Lond. A*
  Miller, D., A. B.
  1985; 313: 239-244
- **Mode Locking of Semiconductor Diode Lasers Using Saturable Excitonic Nonlinearities** *J. Opt. Soc. Am. B*
  Smith, P., W., Silberberg, Y., Miller, D., A. B.
  1985; 2: 1228-1236
- **131 ps Optical Modulation in Semiconductor Quantum Wells (MQW's)** *IEEE J. Quantum Electron.*
  Wood, T., H., Burrus, C., A., Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C.
  1985; QE-21: 117-118
- **Theory of Transient Excitonic Optical Nonlinearities in Semiconductor Quantum-Well Structures** *Phys. Rev. B*
  Schmitt-Rink, S., Chemla, D., S., Miller, D., A. B.
  1985; 32: 6601-6609
- **The Quantum Well Self-Electrooptic Effect Device: Optoelectronic Bistability and Oscillation, and Self Linearized Modulation** *IEEE J. Quantum Electron*
  Miller, D., A. B., Chemla, D., S., Damen, T., C., Wood, T., H., Burrus, C., A., Gossard, A., C.
  1985; QE-21: 1462-1476
- **Highly Anisotropic Optical Properties of Single Quantum Well Waveguides** *Appl. Phys. Lett.*
  Weiner, J., S., Chemla, D., S., Miller, D., A. B., Haus, H., A., Gossard, A., C., Wiegmann, W.
  1985; 47: 664-667
- **Femtosecond Dynamics of Resonantly Excited Excitons in Room Temperature GaAs Quantum Wells** *Phys. Rev. Lett.*
  Knox, W., H., Fork, R., L., Downer, M., C., Miller, D., A. B., Chemla, D., S., Shank, C., V.

1985; 54: 1306-1309

- **Fast Nonlinear Optical Response from Proton-Bombarded Multiple Quantum Well Structures** *Appl. Phys. Lett.*
  Silberberg, Y., Smith, P., W., Miller, D., A. B., Tell, B., Gossard, A., C., Wiegmann, W.
  1985; 46: 701-703
- **100 ps Waveguide Multiple Quantum Well (MQW) Optical Modulator with 10:1 On/Off Ratio** *Electronics Lett.*
  Wood, T., H., Burrus, C., A., Tucker, R., S., Weiner, J., S., Miller, D. , A. B., Chemla, D., S.
  1985; 21: 693-694
- **Strong Polarization-Sensitive Electroabsorption in GaAs/AlGaAs Quantum Well Waveguides** *Appl. Phys. Lett.*
  Weiner, J., S., Miller, D., A. B., Chemla, D., S., Damen, T., C., Burrus, C., A., Wood, T., H.
  1985; 47: 1148-1150
- **Room-temperature Excitons in 1.6μ band-gap GaInAs/AlInAs Quantum Wells** *Appl. Phys. Lett.*
  Weiner, J., S., Chemla, D., S., Miller, D., A. B., Wood, T., H., Sivco, D., Cho, A., Y.
  1985; 46: 619-621
- **Physics and Applications of Room Temperature Excitonic Electroabsorption in Quantum Wells** *J. Opt. Soc. Am. A*
  Miller, D., A. B.
  1985; 2: 47
- **Room Temperature Excitonic Nonlinear Absorption and Refraction in GaAs/AlGaAs Multiple Quantum Well Structures** *IEEE J. Quantum Electron.*
  Chemla, D., S., Miller, D., A. B., Smith, P., W., Gossard, A., C., Wiegmann, W.
  1984; QE-20: 265-275
- **OPTICAL BISTABILITY DUE TO INCREASING ABSORPTION** *OPTICS LETTERS*
  Miller, D. A., Gossard, A. C., WIEGMANN, W.
  1984; 9 (5): 162-164
- **OPTICAL-LEVEL SHIFTER AND SELF-LINEARIZED OPTICAL MODULATOR USING A QUANTUM-WELL SELF-ELECTRO-OPTIC EFFECT DEVICE** *OPTICS LETTERS*
  Miller, D. A., Chemla, D. S., Damen, T. C., Wood, T. H., Burrus, C. A., Gossard, A. C., WIEGMANN, W.
  1984; 9 (12): 567-569
- **NOVEL HYBRID OPTICALLY BISTABLE SWITCH - THE QUANTUM WELL SELF-ELECTRO-OPTIC EFFECT DEVICE** *APPLIED PHYSICS LETTERS*
  Miller, D. A., Chemla, D. S., Damen, T. C., Gossard, A. C., WIEGMANN, W., Wood, T. H., Burrus, C. A.
  1984; 45 (1): 13-15
- **ROOM-TEMPERATURE EXCITONIC NONLINEAR ABSORPTION AND REFRACTION IN GAAS/ALGAAS MULTIPLE QUANTUM WELL STRUCTURES** *IEEE JOURNAL OF QUANTUM ELECTRONICS*
  Chemla, D. S., Miller, D. A., Smith, P. W., Gossard, A. C., WIEGMANN, W.
  1984; 20 (3): 265-275
- **BAND-EDGE ELECTROABSORPTION IN QUANTUM WELL STRUCTURES - THE QUANTUM-CONFINED STARK-EFFECT** *PHYSICAL REVIEW LETTERS*
  Miller, D. A., Chemla, D. S., Damen, T. C., Gossard, A. C., WIEGMANN, W., Wood, T. H., Burrus, C. A.
  1984; 53 (22): 2173-2176
- **HIGH-SPEED OPTICAL MODULATION WITH GAAS/GAALAS QUANTUM WELLS IN A P-I-N-DIODE STRUCTURE** *APPLIED PHYSICS LETTERS*
  Wood, T. H., Burrus, C. A., Miller, D. A., Chemla, D. S., Damen, T. C., Gossard, A. C., WIEGMANN, W.
  1984; 44 (1): 16-18
- **PASSIVE-MODE LOCKING OF A SEMICONDUCTOR DIODE-LASER** *OPTICS LETTERS*
  Silberberg, Y., Smith, P. W., EILENBERGER, D. J., Miller, D. A., Gossard, A. C., WIEGMANN, W.
  1984; 9 (11): 507-509
- **Enhanced Electro-Absorption in GaAs/GaAlAs Multiple Quantum Wells and its Application to Opto-Electronic Devices**

Wood, T., H., Burrus, C., A., Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C.
1984

- **Optical-level Shifter and Self-Linearized Optical Modulator Using a Quantum-Well Self-Electro-Optic Effect Device** *Optics Lett.*
  Miller, D., A. B., Chemla, D., S., Damen, T., C., Wood, T., H., Burrus, C., A., Gossard, A., C.
  1984; 9: 567-569
- **Passive Modelocking of a Semiconductor Diode Laser** *Optics Lett.*
  Silberberg, Y., Smith, P., W., Eilenberger, D., J., Miller, D., A. B., Gossard, A., C., Wiegmann, W.
  1984; 9: 507-509
- **Long Wavelength, Room Temperature Observation of Excitons and 2 Dimensional Electron-hole States in Multiple Quantum Wells (MQWs)**
  Wood, T., H., Burrus, C., A., Weiner, J., S., Chemla, D., S., Miller, D., A. B., Damen, T., C.
  1984
- **Femtosecond Dynamics of Nonequilibrium Correlated Electron-Hole Pair Distributions in Room-Temperature GaAs Multiple Quantum Well Structures**
  Knox, W., H., Fork, R., L., Downer, M., C., Miller, D., A. B., Chemla, D., S., Shank, C., V.
  edited by Auston, D., H., Eisenthal, K., B.
  1984
- **Optical Logic and the Self Electro-optic Effect Device (SEED)**
  Miller, D., A. B.
  1984
- **Optical Bistability due to Increasing Absorption** *Optics Lett.*
  Miller, D., A. B., Gossard, A., C., Wiegmann, W.
  1984; 9: 162-164
- **Optical Bistability and Differential Gain Resulting from Absorption Increasing with Excitation** *J. Opt. Soc. Am. B*
  Miller, D., A. B.
  1984; 1: 857-864
- **Novel Hybrid Optically Bistable Switch: The Quantum Well Self Electro-Optic Effect Device** *Appl. Phys. Lett.*
  Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C., Wiegmann, W., Wood, T., H.
  1984; 45: 13-15
- **High-Speed Optical Modulation with GaAs/GaAlAs Quantum Wells in a p-i-n Diode Structure** *Appl. Phys. Lett.*
  Wood, T., H., Burrus, C., A., Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C.
  1984; 44: 16-18
- **Femtosecond Dynamics of Nonequilibrium Correlated Electron-Hole Pair Distributions in Room-Temperature GaAs Multiple Quantum Well Structures** *Ultrafast Phenomena IV*
  Knox, W., H., Fork, R., L., Downer, M., C., Miller, D., A. B., Chemla, D., S., Shank, C., V.
  1984: 162-165
- **Bandedge Electro-absorption in Quantum Well Structures: The Quantum Confined Stark Effect** *Phys. Rev. Lett.*
  Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C., Wiegmann, W., Wood, T., H.
  1984; 53: 2173-2177
- **Nonlinear Optics with a Diode Laser Light Source** *Optics Lett.*
  Miller, D., A. B., Chemla, D., S., Smith, P., W., Gossard, A., C., Wiegmann, W.
  1983; 8: 477-479
- **DEGENERATE 4-WAVE MIXING IN ROOM-TEMPERATURE GAAS/GAALAS MULTIPLE QUANTUM WELL STRUCTURES** *APPLIED PHYSICS LETTERS*
  Miller, D. A., Chemla, D. S., EILENBERGER, D. J., Smith, P. W., Gossard, A. C., WIEGMANN, W.
  1983; 42 (11): 925-927
- **NON-LINEAR OPTICS WITH A DIODE-LASER LIGHT-SOURCE** *OPTICS LETTERS*
  Miller, D. A., Chemla, D. S., Smith, P. W., Gossard, A. C., WIEGMANN, W.

1983; 8 (9): 477-479

- **ELECTRO-ABSORPTION BY STARK-EFFECT ON ROOM-TEMPERATURE EXCITONS IN GAAS/GAALAS MULTIPLE QUANTUM WELL STRUCTURES** *APPLIED PHYSICS LETTERS*
  Chemla, D. S., Damen, T. C., Miller, D. A., Gossard, A. C., WIEGMANN, W.
  1983; 42 (10): 864-866
- **Dynamic Nonlinear Optics in Semiconductors: Physics and Applications** *Laser Focus*
  Miller, D., A. B.
  1983; 19 (7): 61-68
- **Room Temperature Optical Nonlinear Absorption and Refraction in GaAs Multiple Quantum Wells, Optical Bistability 2**
  Miller, D., A. B., Chemla, D., S., Gossard, A., C., Smith, P., W.
  edited by Bowden, C., M., Gibbs, H., M., McCall, S., L.
  1983
- **High-Speed Optical Modulation with GaAs/GaAlAs Quantum Wells in a p-i-n Diode Structure**
  Wood, T., H., Burrus, C., A., Miller, D., A. B., Chemla, D., S., Damen, T., C., Gossard, A., C.
  1983
- **Electroabsorption by Stark Effect on Room-Temperature Excitons in GaAs/GaAlAs Multiple Quantum Well Structures** *Appl. Phys. Lett.*
  Chemla, D., S., Damen, T., C., Miller, D., A. B., Gossard, A., C., Wiegmann, W.
  1983; 42: 864-866
- **Degenerate Four-Wave Mixing in Room-Temperature GaAs/GaAlAs Multiple Quantum Well Structures** *Appl. Phys. Lett.*
  Miller, D., A. B., Chemla, D., S., Eilenberger, D., J., Smith, P., W., Gossard, A., C., Wiegmann, W.
  1983; 42: 925-927
- **Optical Bistability**
  Miller, D., A. B.
  1982
- **LARGE ROOM-TEMPERATURE OPTICAL NONLINEARITY IN GAAS/GA1-X ALXAS MULTIPLE QUANTUM WELL STRUCTURES** *APPLIED PHYSICS LETTERS*
  Miller, D. A., Chemla, D. S., EILENBERGER, D. J., Smith, P. W., Gossard, A. C., Tsang, W. T.
  1982; 41 (8): 679-681
- **Saturation of Band-Tail Optical Absorption in InSb**
  Miller, D., A. B.
  1982
- **Large Room-Temperature Optical Nonlinearity in GaAs/Ga1-xAlxAs Multiple Quantum Well Structures** *Appl. Phys. Lett.*
  Miller, D., A. B., Chemla, D., S., Eilenberger, D., J., Smith, P., W., Gossard, A., C., Tsang, W., T.
  1982; 41: 679-681
- **Room-Temperature Saturation Characteristics of GaAs-GaAlAs Multiple Quantum Well Structures and of Bulk GaAs** *Appl. Phys. B*
  Miller, D., A. B., Chemla, D., S., Smith, P., W., Gossard, A., C., Tsang, W., T.
  1982; 28: 96-96
- **Dynamic Nonlinear Optics in Semiconductors** *Appl. Phys. B*
  Miller, A., Miller, D., A. B.
  1982; 28: 92-93
- **Bistable Optical Devices: Physics and Operating Characteristics** *Laser Focus*
  Miller, D., A. B.
  1982; 18 (4): 79-84
- **Optical Bistability, Trends in Physics 1981**
  Miller, D., A. B.
  1982

- **Optical Bistability** *Laser Focus*
  Smith, P., W., Miller, D., A. B.
  1982; 18: 77-78
- **Large Nonlinearities in Room-Temperature GaAs Structures** *J. Opt. Soc. Am.*
  Miller, D., A. B., Chemla, D., S., Smith, P., W., Gossard, A., C.
  1982; 72: 1783
- **Dynamic Nonlinear Optical Processes in Semiconductors** *Adv. Phys.*
  Miller, A., Miller, D., A. B., Smith, S., D.
  1981; 30: 697-800
- **Optical Bistability in Semiconductors** *IEEE Journal of Quantum Electronics*
  Miller, D., A. B., Smith, S., D., Seaton, C., T.
  1981; QE-17: 312-317
- **Refractive Fabry-Perot Bistability with Linear Absorption: Theory of Operation and Cavity Optimization** *IEEE Journal of Quantum Electronics*
  Miller, D., A. B.
  1981; QE-17: 306-311
- **Optical Bistability** *Optical Bistability and Multistability in the Semiconductor InSb*
  Miller, D., A. B., Smith, S., D., Seaton, C., T.
  edited by Bowden, C., M., Ciftan, M., Robl, H., R.
  Plenum.1981: 115–126
- **Degenerate Four-Wave Mixing in InSb at 5K** *Optics Communications*
  Miller, D., A. B., Harrison, R., G., Johnston, A., Seaton, C., T., Smith, S., D.
  1980; 32: 478-480
- **Optical Bistability and Transphasor Action using Semiconductor Materials**
  Smith, S., D., Miller, D., A. B.
  1980
- **Computing at the Speed of Light** *New Scientist*
  Smith, S., D., Miller, D., A. B.
  1980; 85
- **Time Reversal of Optical Pulses by Four-Wave Mixing** *Optics Lett.*
  Miller, D., A. B.
  1980; 5: 300-302
- **Optical Bistability and Transphasor Action in Semiconductors**
  Miller, D., A. B., Seaton, C., T., Smith, S., D.
  1980
- **The Microscopic Mechanism of Third-Order Optical Nonlinearity in InSb** *Optics Commun.*
  Miller, D., A. B., Smith, S., D., Wherrett, B., S.
  1980; 35: 221-226
- **Effect of Low-Power Nonlinear Refraction on Laser Beam Propagation in InSb** *Optics Lett.*
  Weaire, D., Wherrett, B., S., Miller, D., A. B., Smith, S., D.
  1979; 4: 331-333
- **Optical Bistability and Transistor Action in a Semiconductor Crystal**
  Miller, D., A. B., Smith, S., D., Johnston, A.
  edited by Wherrett, B., S.
  1979
- **Nonlinear Refraction and Absorption in InSb** *Inst. Phys. Conf. Ser.*
  Holah, G., D., Dempsey, J., Miller, D., A. B., Wherrett, B., S., Miller

1979: 505-508

- **Optical Bistability and Signal Amplification in a Semiconductor Crystal. Application of New Low-Power Nonlinear Effects in InSb** *Appl. Phys. Lett.*
  Miller, D., A. B., Smith, S., D., Johnston, A.
  1979; 35: 658-660

- **Two Beam Optical Signal Amplification and Bistability in InSb** *Optics Commun.*
  Miller, D., A. B., Smith, S., D.
  1979; 31: 101-104

- **Variable Attenuator for Gaussian Laser Beams** *Applied Optics*
  Miller, D. , A. B., Smith, S., D.
  1978; 17: 3804-3808

- **Nonlinear Optical Effects in InSb with a cw CO Laser** *Optics Commun*
  Miller, D. , A. B., Mozolowski, M., H., Miller, A., Smith, S., D.
  1978; 27: 133-136