

RESUME

Kam-Yin Lau

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University of California, Berkeley
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Born – Oct. 1956, Hong Kong
Citizenship: U.S.

Education:

Ph.D. in Electrical Engineering, June 1981
California Institute of Technology, Pasadena, California,
Thesis title: Ultra-high Frequency Dynamics of Semiconductor Injection Lasers
Thesis advisor: Amnon Yariv

M.S. in Electrical Engineering, June 1978
California Institute of Technology, Pasadena, California,

B.S. in Engineering and Applied Sciences, June 1978
California Institute of Technology, Pasadena
G.P.A.: 4.1/4.0, class ranking: first in class of 1978 (institute-wide)

Work Experience:

- | | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7/05 – present | Professor Emeritus
University of California, Berkeley
Dept. of Electrical Engineering and Computer Sciences |
| 8/97– 9/00 | Founding Chairman,
LGC Wireless, Inc., San Jose, California (acquired by ADC Telecom in 2007) |
| 3/97 – 12/02 | Technology venture partner,
Advanced Technology Ventures, Palo Alto, California. |
| 7/90 – 7/05 | Professor
University of California, Berkeley
Dept. of Electrical Engineering and Computer Sciences;
95-96, Vice Chairman, administration |
| 7/88 – 7/90 | Associate Professor
Columbia University
Electrical Engineering Dept.
Director of Lightwave Communication Laboratory of the NSF Center for
Telecommunications Research. |
| 10/81 – 10/88 | Founding Chief Scientist
Ortel Corporation (acquired by Lucent Technologies in 2000) |
| 6/79 – 10/81 | Engineer
Microwave Fiber-optics development, NASA Deep Space Network
Jet Propulsion Laboratory, Pasadena, California. |

Professional Services:

Associate Editor, IEEE Journal of Quantum Electronics, 1995-1997

Associate Editor, IEEE/OSA Journal on Optical Communications and Networking", 2008–2013.
 Guest Editor, IEEE Journal on Selected Topics on Quantum electronics, April 1997.
 Visiting Committee, Division of Engineering and Applied Sciences, California Institute of Technology,
 Pasadena, CA. 2001-2005

Consulting Services -

- IBM T.J. Watson Research Center, Hawthorne, New York. 1988-1990.
- MIT Lincoln Laboratory, Lexington, Massachusetts. 1988-1990.
- Ortel Corp., Alhambra, California. 1988-1998
- United Technologies, Hartford, Connecticut. 1988-1990.
- Boeing Aircraft High Technology Center, Seattle, Washington. 1988-1990.
- Alliant Tech Systems, Arlington, Virginia. 1988-1990.
- Chevron Technology Center, La Habra, California. 1982-1984.
- General Instrument, Horsham, Pennsylvania. 1988-1990.

Honors:

1. Pioneer Award, IEEE Aerospace Electronics Systems Society, 2013, citation - "For pioneering contributions to Enabling NASA's Deep Space Communications and Radar Imaging Systems via Ultra-Stable Frequency/Timing Fiber Optic Transfer."
2. Benjamin Oliver Gold Medal for Engineering, (now Distinguished Award for excellence in engineering,) Armed Forces Communications and Electronics Association, 2011, citation - "For design and implementation of RF photonics technologies enabling advanced electronic warfare systems critical to the U.S. Navy and Air Force, and ultra-high speed fiber optic single shot remote data acquisition systems at the Nevada test site underpinning nuclear test diagnostic capabilities."
3. J.J. Thomson Medal, the IET, 2009, citation - "For pioneering development and commercialization of microwave photonics for cable modem and distributed antenna wireless access infrastructures."
4. David Sarnoff Award, IEEE, 2009, citation - "For seminal contributions to improved dynamics of quantum well semiconductor lasers."
5. Nicholas Holonyak Award, Optical Society of America, 2008, citation - "For seminal contributions to high-speed direct modulation of semiconductor lasers through enhanced differential optical gain."
6. William Striefer Scientific Achievement Award, IEEE Photonics Society, 1996, citation - "For significant contributions to the understanding and design of high speed semiconductor lasers."
7. Distinguished lecturer award, IEEE Photonics Society, 1996, citation - "Microphotonics - an adaptive optoelectronic packaging technology using silicon surface-micromachined, actuated alignment-structures."
8. Fellow, IEEE
9. Fellow, Optical Society of America
10. J.E. Froehlich Memorial Award, California Institute of Technology.

Conference Services:

Program committee, CLEO (Conference on Lasers and Electro Optics) 1998
 Program committee, Device Research Conference 1997, Ft. Collins, Colorado.
 Program co-chair, Topical Meeting on Advanced Semiconductor Lasers and Applications, Montreal 1997
 Program committee, CLEO 1997, Baltimore.
 Program committee, Device Research Conference 1996, Santa Barbara.
 Program committee, CLEO 1996, Anaheim
 Program committee, Co-chairman, Symposium on optics and micromachining, OSA Annual meeting 1995, Portland
 Program committee, CLEO 1995, Baltimore
 Program committee, International Semiconductor Laser Conference, Maui 1994.
 Program committee, CLEO 1994, Anaheim.
 Program committee, OFC (Optical Fiber Communication Conference) 1993, San Jose.
 Chairman, Device subcommittee, Integrated Photonics Research Meeting, Palms Spring, 1993.
 Program committee, OFC 1992, San Jose
 Program committee, International Semiconductor Laser Conference, 1992, Japan.
 Program committee, Topical Meeting on Multi-access Lightwave Network, Santa Barbara, 1992.
 Program committee, Integrated Photonics Research, 1992, New Orleans.
 Program committee, OFC 1991, San Diego
 Program committee, Integrated Photonics Research, 1991, Monterey.
 Chairman, IEEE Semiconductor Laser Workshop, 1990, Anaheim.
 Program committee, International Semiconductor Laser Conference, 1990, Davos, Switzerland.
 Program committee, Integrated Photonics Research Meeting (formerly Integrated and Guided Wave Optics Conference,) 1990, Hilton head.
 Program committee, CLEO 1990 (Conference on Lasers and Electrooptics), Anaheim.
 Program committee, OFC 1990, San Francisco
 Program committee, Topical Meeting on Multi-access Lightwave Network, Monterey 1990.
 Chairman, International Workshop on Quantum Well Optical Device Physics, Kobe, Japan, 1989.
 Program committee, IEDM 1989 (International Electron Device Meeting), San Francisco.
 Program committee, OFC 1989 (Optical Fiber Communication Conference), Houston
 Program committee, CLEO 1989, Baltimore
 Program committee, Topical Meeting on Picosecond Electronics and Opto-electronics, Lake Tahoe, 1985
 Program committee, International Semiconductor Laser Conf., 1986 (Kanazawa, Japan.)

U.S. Patents :

- 1.) 6,819,822 "Two-dimensional gimbaled scanning actuator with vertical electrostatic comb-drive for actuation and/or sensing" (Issued Nov 16, 2004.)
- 2.) 6,788,520 "Capacitive sensing scheme for digital control state detection in optical switches" (Issued September 7, 2004.)
- 3.) 6,758,983 "Staggered torsional electrostatic combdrive and method of forming same" (Issued July 6, 2004.)
- 4.) 6,690,657 "Multichannel distributed wireless repeater network" (Issued February 10, 2004.)
- 5.) 6,449,407 "Optical switch having equalized beam spreading in all connections" (Issued September 10, 2002.)
- 6.) 6,353,600 "Dynamic sectorization in a CDMA cellular system employing centralized base-station architecture" (Issued March 5, 2002.)
- 7.) 6,026,108 "Vertical-cavity surface-emitting laser with an intracavity quantum-well optical absorber" (Issued February 15, 2000.)

- 8.) 6,014,546 "Method and system providing RF distribution for fixed wireless local loop service" (Issued January 11, 2000.)
- 9.) 5,983,070 "Method and system providing increased antenna functionality in a RF distribution system" (Issued April 8, 1997.)
- 10.) 5,867,297 "Apparatus and method for optical scanning with an oscillatory microelectromechanical system" (Issued February 2, 1999.)
- 11.) 5,765,099 "Distribution of radio-frequency signals through low bandwidth infrastructures" (Issued June 9, 1998.)
- 12.) 5,760,419 "Monolithic wavelength meter and photodetector using a wavelength dependent reflector" (Issued June 2, 1998.)
- 13.) 5,668,562 "Measurement-based method of optimizing the placement of antennas in a RF distribution system" (Issued September 29, 1992.)
- 14.) 5,631,916 "Apparatus and method for optically transmitting electrical signals in the 20-300 gigahertz frequency range" (Issued May 20, 1997.)
- 15.) 5,541,756 "Apparatus and method for routing optical signals through wavelength-coding in a self-routed wavelength addressable network" (Issued July 30, 1996.)
- 16.) 5,335,107 "Method and apparatus for modulation of self-pulsating diode laser's self-pulsating frequency" (Issued August 2, 1994.)
- 17.) 4,843,611 "Superluminescent diode and single mode laser" (Issued June 27, 1989.)
- 18.) 4,764,934 "Superluminescent diode and single mode laser" (Issued August 16, 1988.)
- 19.) 4,562,569 "Tandem coupled cavity lasers with separate current control and high parasitic resistance between them for bistability and negative resistance characteristics and use thereof for optical disc readout" (Issued December 31, 1985.)
- 20.) 4,287,606 "Fiber optic transmission line stabilization apparatus and method" (Issued September 1, 1981.)
- 21.) 4,239,337 "Magneto-optic modulator using dielectric mirrors" (Issued December 16, 1980.)

PUBLICATIONS :

Books and book chapters:

1. "Ultra-High Frequency Linear Fiber Optic Systems," Kam.Y. Lau, 1st. edition, Springer, 2009; 2nd. edition, Springer 2011.
2. "Ultra-low Threshold Quantum well Lasers," K.Y. Lau, Chapter 4 in Quantum Well Lasers, Peter S. Zory, Ed., Academic Press 1993.
3. "Dynamics of Quantum Well Lasers," Kam Y. Lau, Chapter 5 in Quantum Well Lasers, Peter S. Zory, Ed., Academic Press 1993.
4. "High Frequency Current Modulation of Semiconductor Injection Lasers," Kam Y. Lau and Amnon Yariv, Chapter 2 in Semiconductors and Semimetals Vol. 22: Lightwave Communications Technology Part B: Semiconductor Injection Lasers, Ed. Won T. Tsang, Academic Press, 1985.
5. "Novel intracavity modulator integrated with a vertical-cavity surface-emitting laser," S.F. Lim, J.A. Hudgings, L.P. Chen, G.S. Li, W. Yuen, K.Y. Lau, and C.J. Chang-Hasnain, p.48-52, Trends in Optics and Photonics Series (TOPS), Ed. C.J. Chang-Hasnain, Optical Society of America, Vol. 15, 1997.

Journal Publications:

1. Kam Y. Lau, George F. Lutes and Robert L. Tjoelker, "Ultra-stable RF-over-Fiber Transport in NASA Antennas, Phased Arrays and Radars [Invited]," IEEE J. Lightwave Technology, Vol. 32, Iss. 20, Page(s): 3440 - 3451, Oct., 2014.
2. Kam Y. Lau, "RF Transport Over Optical Fiber in Urban Wireless Infrastructures [Invited]," IEEE/OSA J. Opt. Commun. Netw. Vol. 4, Iss. 4, Page(s): 326-335, Apr., 2012.
3. Wang, J., Kahn, J.M., Lau, K.Y., "Minimization of acquisition time in short-range free-space optical communication," Applied Optics. Vol. 41, Iss. 36 Page(s): 7592-7602, Dec. 2002.
4. Janice A. Hudgings, Robert J. Stone, Sui F. Lim, Kam Y. Lau and Connie J. Chang-Hasnain, "Comparative study of the analog performance of a vertical-cavity surfaceemitting laser under gain and cavity loss modulation," Appl. Phys. Lett., Vol.:77, Iss. 14, Page(s): 2092-2094, 2000.
5. R.A. Conant, P.M. Hagelin, U. Krishnamoorthy, M. Hart, O. Solgaard, K.Y. Lau, R.S. Muller, "A raster-scanning full-motion video display using polysilicon micromachined mirrors," Sensors & Actuators A, Vol.: 83, no. 1-3, Page(s) 291-296. May, 2000.
6. Hart, M.R., Conant, R.A. Lau, K.Y., Muller, R.S., "Stroboscopic interferometric system for dynamic MEMS characterization," Journal of Microelectro-mechanical Systems, Vol. 9, Iss.: 4, Page(s): 409-418, Dec. 2000.
7. Stone, R.J., Hundgings, J.A., Lim, S.F.; Chang-Hasnain, C.J.; Lau, K.Y., "Independent phase and magnitude control of an optically carried microwave signal with a three-terminal vertical-cavity surface-emitting laser," IEEE Photonics Technology Letters, Vol.:11, Iss.: 4, Apr. 1999,

Page(s): 463-465.

8. Hudgings, J.A.; Stone, R.J.; Chih-Hao Chang; Lim, S.F.; Lau, K.Y., Chang-Hasnain, C.J., "Dynamic behavior and applications of a three-contact vertical-cavity surface emitting laser," *Selected Topics in Quantum Electronics, IEEE Journal on*, Vol.: Iss.: 3, May/June 1999, Page(s): 512-519.
9. Hudgings, J.A.; Lim, S.F.; Li, G.S.; Wupen, Yuen; Lau, K.Y.; Chang-Hasnain, C.J., "Compact, integrated optical disk readout head using a novel bistable vertical-cavity surface-emitting laser," *IEEE Photonics Technology Letters*, Vol.: 11 Iss.: 2, Feb. 1999, Page(s): 245-247.
10. R.S. Muller and K. Y. Lau, "Surface Micromachined Micro-optical Elements and Systems, *Proceedings of the IEEE*, (invited), 86, 1705-1720, August, 1998.
11. Gabriel S. Li; Wupen Yuen; Lau, Kam Y.; Chang-Hasnain, Connie J., "The physics of negative differential resistance of an intracavity voltage-controlled absorber in a vertical- cavity surface-emitting laser," *Applied Physics Letters*, Page(s): 73, Iss. 13, September 28, 1998, Page(s): 1796-1798.
12. Hudgings, J.A.; Lau, K.Y., "Step-tunable all-optical wavelength conversion using cavity-enhanced four-wave mixing," *IEEE Journal of Quantum Electronics*, Vol.: 34 Iss.: 8, Aug. 1998.
13. Lim, S.F.; Hudgings, J.A.; Chen, L.P.; Li, G.S.; Wupen, Yuen; Lau, K.Y. Chang-Hasnain, C.J., "Modulation of a vertical-cavity surface-emitting laser using an intracavity quantum-well absorber," *IEEE Photonics Technology Letters*, Vol.: 10 Iss.: 3, Mar. 1998, Page(s): 319-321.
14. Meng -Hsiung Kiang; Solgaard, O.; Lau, K.Y.; Muller, R.S., "Electrostatic combdrive actuated micromirrors for laser-beam scanning and positioning," *Microelectromechanical Systems, Journal of*, Vol.: 7 Iss.: 1, Mar. 1998, Page(s): 27-37.
15. D.A. Francis, M.-H. Kiang, O. Solgaard, K.Y. Lau, R.S. Muller, C.J. Chang-Hasnain, "Compact 2D laser beam scanner with fan laser array and Si micromachined microscanner," *Electronics Letters (UK)*, Vol.:33, (no.13), IEE, Page(s): 1143-5, June 1997.
16. S. F. Lim, J. A. Hudgings, G. S. Li, W. Yuen, K. Y. Lau and C. J. Chang-Hasnain, "Self-Pulsating VCSEL with Controllable Quantum Well Saturable Absorber," *Electronics Letters*, Vol. 33, no. 20, Page(s): 1708-9, September, 1997.
17. D. A. Francis, M. Kiang, O. Solgaard, K. Y. Lau, R. S. Muller, and C. J. Chang-Hasnain, "Compact 2D Laser Beam Scanner with Fan Laser Array and Si Micromachined Microscanner," *Electronics Letters*, 33, 13, 1143-5, June 1997.
18. Lau, Kam Y., "Ultra-low-threshold quantum-confined lasers are indeed superb, but how "quantum" are they?" *Optics & Photonics News*, Page(s): 8, Iss. 4, Page(s): 26-30, April 1997.
19. Lim, S.F.; Hudgings, J.A.; Li, G.S.; Yuen, W.; Lau, K.Y.; Chang-Hasnain, C.J., "Selfpulsating and bistable VCSEL with controllable intracavity quantum-well saturable absorber," *Electronics Letters*, Vol.: 33 Iss.: 20, 25 Sept. 1997, Page(s): 1708-1710.
20. Park, J.; Sorin, W.V.; Lau, K.Y., "Elimination of the fiber chromatic dispersion penalty on 1550 nm millimetre-wave optical transmission," *Electronics Letters*, Vol.: 33 Iss.: 6, 13 Mar. 1997, Page(s): 512-513.
21. Kam Y. Lau, David M. Cutrer, John B. Georges, Simon Yueng, "Fiber Optic Infrastructure for Wireless Communication Networks," *International Journal of High Speed Electronics and Systems*, Vol.: 8, Iss.: 2, Page(s): 233 - 246, 1997.

22. Buckman, L.A.; Chen, L.P.; Lau, K.Y., "Crosstalk penalty in all-optical distributed switching networks," *IEEE Photonics Technology Letters*, Vol.: 9 Iss.: 2, Feb.1997, Page(s): 250-252.
23. Chen, L.P.; Li, M.Y.; Chang-Hasnain, C.J.; Lau, K.Y., "A low-power 1-Gb/s CMOS laser driver for a zero-bias modulated optical transmitter," *IEEE Photonics Technology Letters*, Vol.: 9 Iss.: 7, July 1997, Page(s): 997- 999.
24. Park, J.; Buckman, L.A.; Lau, K.Y., "A broad-band millimeter-wave optical modulator using a passively modelocked semiconductor laser with phase noise compensation," *IEEE Photonics Technology Letters*, Vol.: 9 Iss.: 5, May 1997, Page(s): 619-621.
25. Park, J.; Elrefaie, A.F.; Lau, K.Y., "1550-nm transmission of digitally modulated 28GHz subcarriers over 77 km of non-dispersion shifted fiber", *IEEE Photonics Technology Letters*, Vol.: 9 Iss.: 2, Feb. 1997, Page(s): 256-258.
26. Georges, J.B.; Yeung, S.P.; Cutrer, D.M.; Ta-Chung Wu; Lau, K.Y.; Lux, R.A.; Chang, W., "Transmission of millimeter-wave signals using uncoated telecommunications-grade distributed feedback lasers," *IEEE Photonics Technology Letters*, Vol.: 8 Iss.: 9, Sept. 1996, Page(s): 1270-1272.
27. N.C. Tien, O. Solgaard, M.-H. Kiang, M. Daneman, K.Y. Lau, R.S. Muller, "Surface-Micromachined Mirrors for Laser-Beam Positioning," *Sensors and Actuators A (Physical)*; March- April 1996; Vol.:A52, no.1-3, p.76-80.
28. M.J. Daneman, N. C. Tien, O. Solgaard, A.P. Pisano, K. Y. Lau, R. S. Muller, "Linear Microvibromotor for Positioning Optical Components", *IEEE Journal of MicroElectroMechanical Systems (JMEMS)*, Vol.: 5, no. 3, Page(s): 159-165, September 1996.
29. M. Daneman, O. Solgaard, N.C. Tien, K.Y. Lau, R.S. Muller, "Laser-to-fiber Coupling Module Using a Micromachined Alignment Mirror", *IEEE Photonics Technology Letters*, Vol.: 8, no. 3, Page(s): 396-398, March 1996.
30. M-H. Kiang, O. Solgaard, R.S.Muller, K.Y. Lau, "Micromachined Polysilicon Microscanners for Barcode Readers", *IEEE Photonics Technology Letters*, Vol.: 8, no. 12, Page(s): 1707-1709, December 1996.
31. Georges, J.B.; Lux, R.A.; Yeung, S.P.; Lau, K.Y.; Chang, W., "Simultaneous fiberoptic transport and RF phase control of narrow-band millimeter-wave signals using multicontact monolithic semiconductor lasers," *IEEE Photonics Technology Letters*, Page(s): 8 Iss.: 7, July 1996, Page(s): 953-955.
32. Meng-Hsiung Kiang; Solgaard, O.; Muller, R.S.; Lau, K.Y., "Silicon-micromachined micromirrors with integrated high-precision actuators for external-cavity semiconductor lasers," *IEEE Photonics Technology Letters*, Vol.: 8 no.: 1, Jan. 1996, Page(s): 95 - 97.
33. Chen, L.P.; Lau, K.Y., "Regime where zero-bias is the low-power solution for digitally modulated laser diodes," *IEEE Photonics Technology Letters*, Vol.: 8 Iss.: 2, Feb. 1996, Page(s): 185-187.
34. Kan, S.C.; Harshman, P.J.; Lau, K.Y.; Wang, Y.; Wang, W.I., "Optical control of resonant tunneling diode monolithically integrated with PIN photodiode," *IEEE Photonics Technology Letters*, Page(s): 8 Iss.: 5, May 1996, Page(s): 641-643.
35. Park, J., Lau, K.Y., "Millimetre-wave (39GHz) wireless-wireless transmission of broadband multichannel compressed digital video," *Electronics Letters*, Vol.: 32 Iss.: 5, 29 Feb. 1996, Page(s): 474.
36. Meng-Hsiung Kiang; Solgaard, O.; Muller, R.S.; Lau, K.Y., "Micromachined polysilicon microscanners for barcode readers," *IEEE Photonics Technology Letters*, Vol.: 8 Iss.: 12, Dec.

1996, Page(s): 1707-1709.

37. Daneman, M.J.; Tien, N.C.; Solgaard, O.; Pisano, A.P.; Lau, K.Y.; Muller, R.S., "Linear microvibromotor for positioning optical components," *Journal of Microelectromechanical Systems*, Vol.: 5 Iss.: 3, Sept. 1996, Page(s): 159-165.
38. Daneman, Michael J.; Tien, Norman C.; Kiang, Meng-Hsiung; Solgaard, Olav; Lau, Kam Y.; Muller, Richard S., "Laser-to-fiber coupling module using a micromachined alignment mirror," *IEEE Photonics Technology Letters*, Vol.: 8 Iss.: 3, Mar. 1996, Page(s): 396-398.
39. Park, J., Elrefaie, A.F.; Lau, K.Y., "Fiber chromatic dispersion effects on multi-channel digital millimeter-wave transmission," *IEEE Photonics Technology Letters*, Vol.: 8 Iss.: 12, Dec. 1996, Page(s): 1716-1718.
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41. Wu, Ta-Chung; Vassilovski, Dan; Cutrer, David M.; Kan, Sidney C.; Lau, Kam Y., "Spontaneous emission measurements for resolving damping mechanisms in direct modulation of quantum well lasers," *Applied Physics Letters*, Vol.: 69, Iss.: 8, Page(s): 1050 - 1052, 1996.
42. Georges, J.B.; Cutrer, D.M.; Lau, K.Y., "Theory of resonant modulation at millimeter wave frequencies of inhomogeneously biased monolithic quantum-well lasers," *IEEE Photonics Technology Letters*, Vol.: 7 Iss.: 3, Mar. 1995, Page(s): 263-265.
43. O. Solgaard, M. Daneman, N.C. Tien, A. Friedberger, R.S. Muller, K.Y. Lau, "Optoelectronic packaging using silicon surface-micromachined alignment mirrors", *IEEE Photonics Techn. Letters*, Vol. 7, no. 1, Page(s): 41-43, January 1995.
44. M. S. Wu, L. A. Buckman, G.S. Li, K.Y. Lau, and C. J. Chang-Hasnain, "Polarization Induced Enhancement of Relative Intensity Noise and Modulation Distortion of Vertical Cavity Surface Emitting Lasers," *Guided-Wave Optoelectronics: Device Characterization, Analysis and Design*, pp. 59-65, Plenum Press. 1995.
45. Vassilovski, D.; Ta-Chung Wu; Kan, S.; Lau, K.Y.; Zah, C.E., "Unambiguous determination of quantum capture, carrier diffusion, and intrinsic effects in quantum well laser dynamics using wavelength-selective optical modulation," *IEEE Photonics Technology Letters*, Vol.: 7 Iss.: 7, July 1995, Page(s): 706-708.
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48. Cutrer, David M.; Georges, John B.; Wu, Ta-Chung; Wu, Bin; Lau, Kam Y., "Resonant modulation of single contact monolithic semiconductor lasers at millimeter wave frequencies," *Applied Physics Letters*, Vol.: 66, no. 17, Page(s): 2153-2155, April 1995.
49. Wu, Bin; Georges, John B.; Cutrer, David M.; Lau, Kam Y., "On distributed microwave effects in semiconductor lasers and their practical implications," *Applied Physics Letters*, Vol.: 67, Iss.: 4, Page(s): 467 - 469, 1995.
50. Solgaard, O.; Daneman, M.; Tien, N.C.; Friedberger, A.; Muller, R.S.; Lau, K.Y.,

- "Optoelectronic packaging using silicon surface-micromachined alignment mirrors," IEEE Photonics Technology Letters, Vol.: 7 Iss.: 1, Jan. 1995, Page(s): 41-43.
51. Georges, J.B.; Cutrer, D.M.; Solgaard, O.; Lau, K.Y., "Optical transmission of narrowband millimeter-wave signals," IEEE Transactions on Microwave Theory and Techniques, Vol.: 43 Iss.: 9, Sept. 1995, Page(s): 2229- 2240.
 52. Georges, J.B.; Cutrer, D.M.; Meng-Hsiung Kiang; Lau, K.Y., "Multichannel millimeter wave subcarrier transmission by resonant modulation of monolithic semiconductor lasers," IEEE Photonics Technology Letters, Vol.: 7 Iss.: 4, April 1995, Page(s): 431-433.
 53. Park, J., Shakouri, M.S.; Lau, K.Y., "Millimetre-wave electro-optical upconverter for wireless digital communications," Electronics Letters, Vol.: 31 Iss.: 13, 22, June 1995, Page(s): 1085-1086.
 54. Kiang, M.-H.; Lau, K.Y., "Frequency and tuning characteristics of passively modelocked semiconductor lasers operated at 77 K," Electronics Letters, Vol.: 31 Iss.: 11, 25 May 1995, Page(s): 880-882.
 55. Cutrer, D.M.; Georges, J.B.; Le, T.H.; Lau, K.Y., "Dynamic range requirements for optical transmitters in fiber-fed microcellular networks," IEEE Photonics Technology Letters, Vol.: 7 Iss.: 5, May 1995, Page(s): 564-566.
 56. Wu, Ta-Chung, Kan, Sidney C., Vassilovski, Dan; Lau, Kam Y., "Characteristics of longitudinal optical phonon assisted quantum carrier capture process temperature and bias dependence," Applied Physics Letters, Vol.: 67, Iss.: 9, Page(s): 1220 - 1222, 1995.
 57. Cutrer, D.M.; Georges, J.B.; Lau, K.Y., "Building the FO infrastructure for wireless communications," IEEE Circuits and Devices Magazine, Vol.: 11 Iss.: 4, July 1995, Page(s): 13-17.
 58. Buckman, L.A.; Wu, M.S.; Giaretta, G.; Li, G.S.; Pepeljugoski, P.K.; Goodman, J.W.; Varma, A.; Lau, K.Y.; Chang-Hasnain, C.J., "A novel all-optical self-routed wavelength-addressable network (SWANET)," IEEE Photonics Technology Letters, Vol.: 7 Iss.: 9, Sept. 1995, Page(s): 1066-1068.
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 61. Pepeljugoski, Petar K.; Cutrer, David M.; Lau, Kam Y., "Parametric dependence of timing jitter in gain-switched semiconductor lasers," Applied Physics Letters, Vol.: 63, Iss.: 26, Page(s): 3556 - 3558, 1993.
 62. Pepeljugoski, P.; Lin, J.; Gamelin, J.; Hong, M.; Lau, K. Y., "Ultralow timing jitter in electrically gain-switched vertical cavity surface emitting lasers," Applied Physics Letters, Vol.: 62, no. 14, Page(s): 1588- 1590, April 1993.
 63. Buckman, L.A.; Georges, J.B.; Park, J.; Vassilovski, D.; Kahn, J.M.; Lau, K.Y., "Stabilization of millimeter-wave frequencies from passively mode-locked semiconductor lasers using an optoelectronic phase-locked loop," IEEE Photonics Technology Letters, Vol.: 5 Iss.: 10, Oct. 1993, Page(s): 1137-1140.
 64. Lau, K.Y.; Gee, C.M.; Chen, T.R.; Bar-Chaim, N.; Ury, I., "Signal-induced noise in fiber-optic

- links using directly modulated Fabry-Perot and distributed-feedback laser diodes," *IEEE Journal of Lightwave Technology*, , Vol.: 11 Iss.: 7, July 1993, Page(s): 1216-1225.
65. Georges, J.B.; Lau, K.Y., "Self-pulsating laser diodes as fast-tunable (≤ 1 ns) FSK transmitters in subcarrier multiple-access networks," *IEEE Photonics Technology Letters*, Vol.: 5 Iss.: 2, Feb. 1993, Page(s): 242-245.
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