

PROFESSIONAL PUBLICATIONS

MARK A. REED

BOOKS

1. *Nanostructure Physics and Fabrication* (Proceedings of the International Conference on Nanostructure Physics and Fabrication, College Station, Texas, 13-15 March 1989), edited by M. A. Reed and W. P. Kirk (Academic Press, San Diego, 1989).
2. *Nanostructures and Mesoscopic Systems* (Proceedings of the International Conference on Nanostructures and Mesoscopic Systems, Santa Fe, New Mexico, 20-24 May 1991), edited by W. P. Kirk and M. A. Reed (Academic Press, San Diego, 1992).
3. *Nanostructured Systems*, Volume 35 of the series *Semiconductors and Semimetals*, R. K. Willardson, A. C. Beer, and E. R. Weber series editors, M. A. Reed volume editor (Academic Press, San Diego, 1992).
4. *Compound Semiconductors 1997* (Proceedings of the 24th International Symposium on Compound Semiconductors, San Diego, 8-11 September 1997), edited by M. Melloch and M. A. Reed. (Institute of Physics., 1998).
5. *Molecular Electronics* (MRS Symposium Proceedings, Volume 582), edited by S. T. Pantelides, M. A. Reed, J. S. Murday, and A. Aviram (MRS, Warrendale, PA 2001).
6. *Molecular Nanoelectronics*, edited by M. A. Reed and T. Lee, (American Scientific Publishers, 2003).

BOOK CHAPTERS

1. M. A. Reed, "Resonant Tunneling in Double Barrier Heterostructures", *Properties of Impurity States in Semiconductor Superlattices*, NATO ASI Series B : Physics Vol. **183** (Plenum, New York, 1988), pp. 255-269.
2. M. A. Reed, J. H. Luscombe, J. N. Randall, W. R. Frensley, R. J. Aggarwal, R. J. Matyi, T. M. Moore, and A. E. Wetsel, "Quantum Dot Resonant Tunneling Spectroscopy", *Proceedings of NATO Advanced Research Workshop on the Science and Engineering of 1- and 0- Dimensional Semiconductors*, Cadiz, Spain, 29 March - 1 April 1989, pg. 139.
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5. M. A. Reed and A. C. Seabaugh, "Prospects for Semiconductor Quantum Devices", in *Biomolecular Electronics*, editor R. R. Birge, in the series American Chemical Society Advances in Chemistry (American Chemical Society, 1994).
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PROFESSIONAL PRESENTATIONS (invited)

1. "Evidence for Spatial Quantization in GaAs-AlGaAs Quantum Dots", Meeting of the American Physical Society, Baltimore, Maryland, 25-29 March 1985.
2. "Spatial Quantization in GaAs-AlGaAs Quantum Structures", Colloquia at Texas A&M University, College Station, Texas, 15 October 1984.
3. "Localization Effects and Spatial Quantization in GaAs-AlGaAs Quantum Structures", Colloquia at Yale University, New Haven, Connecticut, 1 July 1985.
4. "Spatial Quantization in GaAs-AlGaAs Quantum Structures", Colloquia at MIT Lincoln Labs, Lexington, Massachusetts, 2 July 1985.
5. "Physics Research at Texas Instruments", Colloquia at Syracuse University, Syracuse, New York, 3 July 1985.
6. "Excited State Resonant Tunneling in GaAs-AlGaAs Double Barrier Heterostructures", Arizona State University Workshop on Ultrasmall and Quantum Structures Devices, Tempe, Arizona, 9-10 December, 1985.
7. "Resonant Tunneling Devices for USER", ONR Workshop on Ultra Submicron System Architectures, Pasadena, California, 19-20 December 1985.
8. "Quantum Devices", Colloquia at the University of Texas at Arlington, Arlington, Texas, October 1985.
9. "Quantum Devices", Colloquia at the University of Texas at Dallas, Dallas, Texas, September, 1985.
10. "Resonant Tunneling in Heterostructures", Colloquia at the University of Texas at Dallas, Dallas, Texas, 5 March 1986.
11. "Resonant Tunneling in Double Barrier Heterostructures", Meeting of the Texas Section of the American Physical Society, Dallas, Texas, 4-5 April 1986.
12. "Quantum Semiconductor Devices", 1986 Symposium on VLSI Technology, San Diego, California, 28-30 May 1986. (**Plenary talk**)
13. "Resonant Tunneling in Heterostructures", Colloquia at the University of Glasgow, Glasgow, Scotland, 29 August 1986.
14. "Resonant Tunneling in Quantum Well Structures", Colloquia at Cambridge University, Cambridge, England, 3 September 1986.
15. "Resonant Tunneling in Double Barrier Heterostructures", Colloquia at the State University of New York at Buffalo, Buffalo, New York, 2 October 1986.
16. "Quantum Semiconductor Devices", 3rd International Symposium on Molecular Electronic Devices, Washington, D. C., 6-8 October 1986.
17. "Resonant Tunneling in Double Barrier Heterostructures", Colloquia at Texas A&M University, College Station, Texas, 21 November 1986.

18. "Semiconductor Heterojunction Resonant Tunneling Devices", Meeting of the American Physical Society, New York City, New York, 16-20 March 1987.
19. "Resonant Tunneling in a GaAs Injector / AlGaAs Double Barrier / InGaAs Quantum Well Heterostructure", Ballistic Electrons for Transistors Workshop, 22-27 March 1987, Santa Barbara, California.
20. "Frontiers in Artificially Structured Materials", Colloquia at North Texas State University, Denton, Texas, 28 April 1987
21. "Bandgap and Wavefunction Engineered Semiconductors", Joint Symposium of the N. Texas AVS-ECS-MRS, Dallas, Texas, 2 June 1987.
22. "Vertical Electronic Transport in Novel Semiconductor Heterojunction Structures", 3rd International Conference on Superlattices, Microstructures, and Microdevices, Chicago, Illinois, 17-20 August 1987.
23. "Resonant Tunneling in Semiconductor Heterojunctions", NATO Workshop on the Properties of Impurity States in Superlattice Semiconductors, Essex, UK, 7-11 September 1987.
24. "Electron Transport Phenomena in Heterostructure Quantum Wires and Quantum Dots", Colloquia at Texas A&M University, College Station, Texas, 20 November 1987.
25. "Resonant Tunneling in Novel Semiconductor Heterostructures", Colloquia at AT&T Bell Laboratories, Murray Hill, New Jersey, 17 December 1987.
26. "Resonant Tunneling in Novel Semiconductor Heterostructures", Colloquia at AT&T Bell Laboratories, Holmdel, New Jersey, 18 December 1987.
27. "Vertical Electronic Transport in Semiconductor Nanostructures", 5th International Winterschool on Recent Advances in Solid State Physics : Physics and Technology of Submicron Structures, 22-26 February 1988, Mauterndorf, Austria.
28. "Vertical Electronic Transport in Semiconductor Nanostructures", Colloquia at the National Research Council, Ottawa, Canada, 10 May 1988.
29. "Quantum Wires and Quantum Dots", AFOSR Workshop on Quantum Devices, Atlanta, Georgia, 15-16 September 1988.
30. "Bandgap and Wavefunction Engineered Quantum Semiconductor Devices" Colloquia at the Schottky Institute, München, Germany, 11 October 1988.
31. "Realization of a Three-Terminal Resonant Tunneling Device : The Bipolar Quantum Resonant Tunneling Transistor", Advanced Heterostructure Transistor Conference, Keauhou, Hawaii, 6-10 December 1988.
32. "Quantum Dot Resonant Tunneling", MIT Physics/Industry Forum : Physics in Semiconductor Microstructures, MIT, Boston, Massachusetts, 27 February 1989.
33. "Investigation of Semiconductor Quantum Dots by Resonant Tunneling", American Physical Society, St. Louis, Missouri, 20-24 March 1989.

34. "Quantum Dots Resonant Tunneling Spectroscopy", NATO Advanced Research Workshop, Cadiz, Spain, 29 March - 1 April 1989.
35. "Quantum Dots Resonant Tunneling Spectroscopy", Arbeitskreis Festkörperphysik bei der Deutschen Physikalischen Gesellschaft (German Physical Society, Solid State), Münster, Germany, 3-7 April 1989. (**Plenary talk**)
36. "Quantum Devices", Colloquia at Georgia Tech, Atlanta, Georgia, 1 June 1989.
37. "Quantum Dot Resonant Tunneling Spectroscopy", Colloquia at the University of Illinois, Champaign-Urbana, Illinois, 12 September 1989.
38. "Quantum Dot Resonant Tunneling Spectroscopy", 6th International Winterschool on New Developments in Solid State Physics : Localization and Confinement of Electrons in Semiconductors, Mauterndorf, Austria, 19-23 February 1990.
39. "Fabrication and Spectroscopy of Quantum Semiconductor Devices", IEEE Electron Devices Society, Dallas, 22 March 1990.
40. "Resonant Tunneling Device Physics and Applications", MRS Spring Meeting, San Francisco, April 1990.
41. "Quantum Semiconductors", ECS Annual Meeting, Montreal, Canada, May 1990.
42. "Low Dimensional Resonant Tunneling", NATO ARW on Resonant Tunneling, El Escorial (Madrid), Spain, May 1990.
43. "Non-Equilibrium Quantum Dot Transport", NATO ASI on Granular Electronics, Il Ciocco, Italy, July-August 1990.
44. "Quantum Dot Resonant Tunneling", Advanced Heterostructure Transistor Conference, Keauhou, Hawaii, 3-8 December 1990.
45. "Tunneling in Finite Superlattices", Advanced Heterostructure Transistor Conference, Keauhou, Hawaii, December 1990.
46. "Quantum Semiconductor Devices", Colloquia at the University of Connecticut, Storrs, Connecticut, 8 February 1991.
47. "Quantum Semiconductor Devices", Colloquia at Syracuse University Chemistry Department, Syracuse, New York, 19 February 1991.
48. "Quantum Dot Resonant Tunneling", Colloquia at Syracuse University Physics Department, Syracuse, New York, 21 February 1991.
49. "Quantum Semiconductor Devices", Colloquia at the John Hopkins Applied Physics Lab, Laurel, Maryland, 8 March 1991.
50. "Semiconductor Quantum Devices, Circuits, and Applications", Olin Metals Research Laboratories, New Haven, CT, 19 April 1991.
51. "Tunneling Devices", Workshop on the Optical Properties of Nanostructures, Snowbird, Utah, 23-26 April 1991.
52. "Resonant Tunneling Semiconductor Device Physics and Applications", Annual Meeting of the Electrochemical Society, Washington, DC, 8 May 1991.

53. "Non-Equilibrium Quantum Dot Transport", Workshop on Granular Nanoelectronics, University of Illinois, Champaign-Urbana, Illinois, 15-17 May 1991.
54. "Semiconductor Quantum Dot Resonant Tunneling Spectroscopy", 7th International Conference on Hot Carriers in Semiconductors (HCIS-7), Nara, Japan, 1-5 July 1991. (**Plenary talk**)
55. "Quantum Devices", Inaugural Colloquium, TI Tsukuba Research Center, Tsukuba, Japan, 4 July 1991.
56. "Quantum Dot Transport", National Research Council of Canada Workshop on Mesoscopic Systems, Ottawa, 19-23 August 1991.
57. Presentation, Motorola Workshop on Future Electron Devices, Phoenix, 23 September 1991.
58. Presentation, WOCSEMMAD, San Antonio, 18 February 1992.
59. "Nanotechnology", Annual IOC Aerospace Symposium, Stamford, CT, 15 May 1992.
60. "Quantum Devices or Quantum Chaos?", Electrochemical Society, St. Louis, 20 May 1992.
61. "Quantum Devices", Naval Research Laboratories, Washington, D. C., 26 June 1992.
62. "Tunneling Spectroscopy", NRC Workshop, Ottawa, Canada, 9-15 July 1992.
63. "Tunneling Spectroscopy of Finite Superlattices", 6th Canadian Semiconductor Technology Conference, Ottawa, Canada, 11-13 August 1992.
64. "Quantum Dot Tunneling Spectroscopy", Engineering Foundation Conference on Atomic Manipulation, Ventura, CA, 17-22 August 1992.
65. "Electron Coherence in Finite Superlattices", Engineering Foundation Conference on Advanced Heterostructure Transistors, Keauhou-Kona, HI, 29 November - 4 December 1992.
66. "Tunneling Spectroscopy of Low Dimensional Systems", Hitachi-Cambridge 1992 Seminar on Mesoscopic Physics, Cambridge, U.K., 14 December 1992.
67. "Observation of Additional Conductance Structure in Resonant Tunneling Heterostructures", National Research Council of Canada Workshop on Quantum Dots, Ottawa, 6-10 June 1993.
68. "Novel Resonant Tunneling Structures and Phenomena", Colloquia at SUNY Stonybrook, 10 September 1993.
69. "Semiconductor Quantum Devices", NYS APS Symposium on Nanostructures, SUNY Buffalo, 23 October 1993.
70. "Low Dimensional Resonant Tunneling and Coulomb Blockade: A Comparison of Fabricated versus Impurity Confinement", International Semiconductor Device Research Symposium, Charlottesville, VA, 1-3 December 1993.

71. "Low Dimensional Resonant Tunneling and Coulomb Blockade: A Comparison of Fabricated versus Impurity Confinement", 8th International Winterschool on New Developments in Solid State Physics, 14-19 February 1994, Mauterndorf, Austria.
72. "Semiconductor Quantum Devices", Colloquia at Columbia University, New York, 19 April 1994.
73. "Electron Transport in Wavefunction Engineered Semiconductors", Colloquia at Rice University, Houston TX, 21 April 1994.
74. "Low Dimensional Resonant Tunneling and Coulomb Blockade: A Comparison of Fabricated versus Impurity Confinement", Conference on Surfaces and Interfaces in Mesoscopic Devices, Keauhou-Kona, HI, 24-29 April 1994.
75. "Fabrication of Nanoscale Devices" (4 lectures), NATO ASI, Il Ciocco, Italy, July, 1994.
76. "Quantum Devices", Workshop on Heterostructure Transistors, Mt. Fuji, Japan, August 1994.
77. "Magnetotunneling in RIT structures", Advanced Heterostructure Transistors, Kohala, Hawaii, December 1994.
78. "3-D to 0-D single electron tunneling through bound states of donor impurities in resonant tunneling heterostructures", Canadian Physical Society Meeting, Quebec, June 1995.
79. "Room Temperature Conductance Quantization in Nanoscale Metallic Contacts", International Research Symposium on Future Information Processing Technologies, Helsinki, Finland, 4-8 September 1995.
80. "Room Temperature Conductance Quantization in Nanoscale Metallic Contacts", Science/Technology of Nanometer Structures (NST) Program at the 42nd National Symposium of the American Vacuum Society (AVS) Meeting, Minneapolis, Minnesota, 17 October 1995.
81. "Conductance Quantization in Microfabricated Break Junctions", PCSI, 21-25 January 1996.
82. "Conductance Measurements of Single Atoms and Molecular Systems", Colloquia, IBM Watson Research Labs, 21 February 1996.
83. "Conductance Measurements of Single Atoms and Molecular Systems", Colloquia, Brookhaven National Labs, 11 April 1996.
84. "Conductance Measurements of Single Atoms and Molecular Systems", NATO Advanced Research Workshop, Les Houches, France, May 6-10, 1996.
85. "Conductance Measurements of Single Atoms and Molecular Systems", AVS meeting, Philadelphia, October 1996.
86. "Novel compressed functionality circuits", Advanced Heterostructure Transistors, Kohala, Hawaii, December 1996.

87. "Interband tunneling device structures", Advanced Heterostructure Transistors, Kohala, Hawaii, December 1996.
88. "Conductance of molecular junctions", Meeting of the American Physical Society, Kansas City, Missouri, 17-21 March, 1997.
89. "Transport in molecular systems", Colloquia, at CEA-Saclay, Paris, France, 9 April 1997.
90. "Conductance Measurements of Single Atom and Molecule Systems", Colloquia, Simon Fraser University, Canada, 11 July 1997.
91. "Conductance Measurements of Single Atom and Molecule Systems", Quantum Functional Devices, Arlington, 5 November 1997.
92. "Conductance Measurements of Single Atom and Molecule Systems", Humanaco, Puerto Rico, 15-19 December, 1997.
93. "Conductance of Molecular Junctions", Colloquia, AT&T Lucent Technologies, Murray Hill, 6 January, 1998.
94. "Conductance Measurements of Single Atom and Molecule Systems", Colloquia, Rice University, Houston, 16 January, 1998.
95. "Conductance Measurements of Single Atom and Molecule Systems", Colloquia, Hewlett-Packard Laboratories, Palo Alto, 20 March, 1998.
96. "Conductance of Molecular Junctions", American Chemical Society, Dallas, 1 April 1998.
97. "Molecular Electronics", Workshop on Micrites, Washington, 30 April 1998.
98. "Molecular Electronics – Future Prospects and Reality", NATO ARW on Future Trends in Microelectronics, Isle de Embiez, France, 1-5 June 1998.
99. "Conductance Measurements of Single Atom and Molecule Systems", Lecturer, Summer School, Pisa, Italy, 15-19 June, 1998.
100. "Prospects for Molecular Electronics", Motorola Workshop, Austin, Texas, 28 June, 1998.
101. "Conductance of molecular junctions", Gordon Conference on Donor-Acceptor Interactions, Newport, Rhode Island, 12 August 1998.
102. Lecturer, Summer School on Microelectronics, Photonics, and Nanoscience, Enköping, Sweden, 27-28 August 1998. **(Plenary talk).**
103. "Conductance of Molecular Junctions", Colloquia, Vanderbilt University, Nashville, Tennessee, 18 September 1998.
104. "Conductance of Molecular Junctions", Colloquia, University of Alabama, Tuscaloosa, Alabama, 25 September 1998.
105. "Conductance of Molecular Junctions", Symposium on Nanotechnology, American Chemical Society, Rochester, New York, 15-16 October 1998.

106. "Conductance of Molecular Junctions", Symposium on Nanotechnology, SUNY Buffalo, Buffalo, New York, 23-24 October, 1998.
107. "Conductance of Molecular Junctions", Colloquia, University of Massachusetts, Amherst, Massachusetts, 30 October, 1998.
108. "Conductance of Molecular Junctions", American Vacuum Society, Baltimore, Maryland, 3 November, 1998.
109. "Conductance of Molecular Junctions", Foresight Institute Conference on Nanotechnology, San Jose, California, 13 November, 1998.
110. "Single Atom Transport and Resonant Tunneling", Advanced Heterostructure Transistors, Kohala, Hawaii, 30 November – 4 December, 1998.
111. "Conductance Measurements of Single Atom and Molecule Systems", Workshop on Novel Phenomena in Mesoscopic Systems, Lihue, Hawaii, 7-11 December, 1998.
112. "Conductance of Molecular Junctions", Colloquium, U. British Columbia, Vancouver, Canada, 4 February 1999.
113. "Conductance of Molecular Junctions", Colloquium, U. Louisville, Louisville, Kentucky, 22 April 1999.
114. "Conductance of Molecular Junctions", Yale Annual Science Forum, New Haven, Connecticut, 8 May 1999.
115. "Conductance of Molecular Junctions", 54th Annual Congress, Canadian Association of Physics, Fredericton, Canada, 8 June 1999.
116. "Progress in Molecular Scale Devices and Circuits", invited talk, Device Research Conference, Santa Barbara, California, 29 June 1999.
117. "Molecular Scale Electronics", Sun Technical Leadership Conference, Scott's Valley, California, 10 September 1999.
118. "Molecular-Scale Electronics", Frontiers of Technology talk, Penn State University, College Park, Pennsylvania, 13 October 1999.
119. "Molecular-Scale Electronics", Colloquia, Brookhaven National Labs, Brookhaven, New York, 10 November 1999.
120. "The Design and Measurement of Molecular Electronic Switches", NASA Ames Workshop on Nanotechnology, Moffett Field, California, 15 November 1999.
121. "Prospects for Molecular Scale Electronics", Frontiers of Materials Research invited talk, MRS Fall 1999 Meeting, Boston, Massachusetts, 29 November 1999.
122. "Prospects for Molecular Scale Devices", IEDM, Washington D.C., 6 December 1999.
123. "The Design and Measurement of Molecular Electronic Switches", Colloquia at MIT Lincoln Labs, Lexington, Massachusetts, 14 February 2000.
124. "The Design and Measurement of Molecular Electronic Switches", Colloquium, U. C. Berkeley, Berkeley, California, 28 February 2000.

125. "The Design and Measurement of Molecular Electronic Switches", International Winterschool on Electronic Properties of Novel Materials, Kirchberg, Austria, 6-10 March 2000.
126. "The Design and Measurement of Molecular Electronic Switches", Meeting of the American Physical Society, Minneapolis, Minnesota, 20 March 2000.
127. "The Design and Measurement of Molecular Electronic Switches", Colloquium, U. Michigan, Ann Arbor, Michigan, 14 April 2000.
128. "The Design and Measurement of Molecular Electronic Switches", VLSI series, MIT, Boston, Massachusetts 25 April 2000.
129. "The Design and Measurement of Molecular Electronic Switches", Banff Workshop, Banff, Canada, 22 May, 2000.
130. "The Design and Measurement of Molecular Electronic Switches", International Conference on Electron, Ion and Photon Beam Technology and Nanofabrication, Palm Springs, California, 31 May, 2000.
131. "The Design and Measurement of Molecular Electronic Switches", Science 2000, Los Alamos National Laboratories, Los Alamos, New Mexico, 5-9 June, 2000.
132. "The Design and Measurement of Molecular Electronic Switches", International Symposium on Molecular Electronics, Prague, Czech Republic, 13-15 June 2000.
133. "The Design and Measurement of Molecular Electronic Switches", EMC, Denver, Colorado, 21 June 2000.
134. "The Design and Measurement of Molecular Electronic Switches and Memories", ACS, Washington, DC, 21 August 2000.
135. "The Design and Measurement of Molecular Electronic Switches and Memories", Colloquium, U. Ohio, Athens, OH, 15 September 2000.
136. "The Design and Measurement of Molecular Electronic Switches and Memories", Colloquium, Corning Laboratories, Corning, NY 15 September 2000.
137. "The Design and Measurement of Molecular Electronic Switches and Memories", FED, Kanazawa, Japan, 15 October 2000.
138. "The Design and Measurement of Molecular Electronic Switches and Memories", MRS, Boston, MA, 20 November 2000.
139. "The Design and Measurement of Molecular Electronic Switches and Memories", AHW, Kohala, HI, 5 December 2000.
140. "The Design and Measurement of Molecular Electronic Switches and Memories", Polymillennial, Waikaloa, HI, 10 December 2000.
141. "The Future of Molecular Electronics", Molecular Electronics 2000, Kona, HI, 14 December 2000.
142. "The Design and Measurement of Molecular Electronic Switches and Memories", National Magnet Lab, Tallahassee, FL, 19 January 2001.

143. "Molecular Scale Electronics", Colloquium, U. Penn, Philadelphia, PA, 25 January 2001.
144. "Molecular Scale Electronics", Colloquium, Purdue U., Lafayette, IL, 1 February 2001.
145. "The Design and Measurement of Molecular Electronic Switches and Memories", ICMI, Santa Clara, CA, 5 February 2001.
146. "The Design and Measurement of Molecular Electronic Switches and Memories", ISSCC, San Francisco, CA, 6 February 2001.
147. "The Design and Measurement of Molecular Electronic Switches and Memories", AAAS, San Francisco, CA, 16 February 2001.
148. "Molecular Scale Electronics", IEEE Aerospace Conference, Big Sky, MN, 10 March 2001. (**Plenary talk**).
149. "Molecular Scale Electronics", Great Lakes VLSI Symposium, Lafayette, IL, 22 March 2001. (**Plenary dinner talk**).
150. "The Design and Measurement of Molecular Electronic Switches and Memories", Julicher Colloquium, Julich, Germany, 6 April 2001.
151. "The Design and Measurement of Molecular Electronic Switches and Memories", MRS, San Francisco, CA, 17 April 2001.
152. "The Design and Measurement of Molecular Electronic Switches and Memories", IBM/NSF Workshop, San Jose, CA, 24 April 2001.
153. "The Design and Measurement of Molecular Electronic Switches and Memories", Colloquium, Syracuse U., Syracuse, NY, 26 April 2001.
154. "Atomic and Molecular Scale Electronic Transport", Sackler Colloquium, National Academy of Science, Washington, DC, 20 May 2001
155. "Molecular Electronics", Crossroads Venture Fair, New Haven, CT, 22 May 2001.
156. "Atomic and Molecular Scale Electronic Transport", CIAR Colloquium, Victoria, BC, Canada, 2 June 2001.
157. "Molecular Electronics", Daimler-Benz Conference on Connecticut Innovation, New Haven, CT, 22 June 2001.
158. "Molecular Electronic Devices", Taiwan Nanotechnology Forum, Hsinchu, Taiwan, 9-11 July 2001. (**Plenary talk**).
159. "Atomic and Molecular Scale Electronic Transport", lecturer at the Erice International School on Nanotechnology, Erice, Sicily, Italy, 23-27 July 2001.
160. "Atomic and Molecular Scale Electronic Transport", ACS, Chicago, IL, 27 August 2001.
161. "Atomic and Molecular Scale Electronic Transport", Colloquium, Cornell, Ithaca, NY, 30 August 2001.

162. "Atomic and Molecular Scale Electronic Transport", Colloquium, NRL, Washington, DC, 24 September 2001.
163. "The Future of Electronics – Molecular Scale", ISCS, Tokyo, Japan, 1 October 2001.
164. "Atomic and Molecular Scale Electronic Transport", NRC/CNRC Conference of Molecular Electronics and Photonics, Montabello, Canada, 15 October 2001.
165. "Atomic and Molecular Scale Electronic Transport", Hunter College Nanotechnology Symposium, New York, NY, 19 October 2001.
166. "Atomic and Molecular Scale Electronic Transport", Colloquium, RPI, Troy, NY, 9 November 2001.
167. "Atomic and Molecular Scale Electronic Transport", US/Germany Joint Symposium on Nanotechnology, MIT, Cambridge, MA, 5 December 2001.
168. "Atomic and Molecular Scale Electronic Transport", Colloquium, NRC, Ottawa, Canada, 7 December 2001.
169. "Atomic and Molecular Scale Electronic Transport", Colloquium, U. Minnesota, Minneapolis, MN, 10 December 2001.
170. "Atomic and Molecular Scale Electronic Transport", Colloquium, Technical University of Catalonia, Barcelona, Spain, 31 January 2002.
171. "Atomic and Molecular Scale Electronic Transport", ISCS Quantum Device Award Symposium, Fujitsu Quantum Devices Ltd., Kofu City, Japan, 20 February 2002. **(Award talk)**
172. "Atomic and Molecular Scale Electronic Transport", 12th International Winterschool on New Developments in Solid State Physics, Mauterndorf, Austria, 26 February 2002.
173. "Atomic and Molecular Scale Electronic Transport", Colloquium, Naval Research Labs, Washington, DC, 15 March 2002.
174. "Atomic and Molecular Scale Electronic Transport", Colloquium, ETH, Zurich, Switzerland, 13 May 2002.
175. "Atomic and Molecular Scale Electronic Transport", CIAR 20th Anniversary Symposium, Victoria, Canada, 17 June 2002. **(Plenary talk)**
176. "Atomic and Molecular Scale Electronic Transport", NATO ASI on Molecular Electronics: Bio-sensor and Bio-computers, Pisa, Italy, 24-26 June 2002.
177. "Atomic and Molecular Scale Electronic Transport", Symposium on Molecular Electronics, Seoul, Korea, 3 July 2002. **(Plenary talk)**
178. "Atomic and Molecular Scale Electronic Transport", EPENS 2002, Montauk, NY, 23 September 2002.
179. "Atomic and Molecular Scale Electronic Transport", ACS NY 2002 Fall Symposium, Rochester, NY, 18 October 2002.

180. The 2002 Guptill Memorial Lecture, “The Coming of Age of Nanoelectronics”, Dalhousie University, Halifax, NS, Canada, 25 October 2002. (**Plenary talk**)
181. “Molecular Electronics”, AIP Corporate Associates Meeting Symposium on *Frontiers in Physics*, Williamsburg, VA, 29 October 2002.
182. “The Coming of Age of Nanoelectronics”, ASME Hartford, 6 November 2002.
183. “The Practical Nanoscientist: So Many Atoms, So Little Time”, Nanotech Planet 2002 conference, New York City, NY, 18 November 2002.
184. “Atomic and Molecular Scale Electronic Transport”, Polymeric Nanomaterials 2002 Biennial Symposium, Sonoma, CA, 20 November 2002.
185. “Down the Molehole: Atomic and Molecular Scale Electronic Transport”, 25th Year USER Symposium, Kohala, HI, 29 November 2002.
186. “Molecular Transport”, AHW, Kohala, HI, 3 December 2002.
187. “GaN Nanowires”, AHW, Kohala, HI, 3 December 2002.
188. “A Decade of Molecular Electronics”, 2002 Molecular Electronics Conference, Key West, FL, 16 December 2002.
189. “Atomic and Molecular Scale Electronic Transport”, Colloquium, UCSB, Santa Barbara, CA, 10 February 2003.
190. “Atomic and Molecular Scale Electronic Transport”, Colloquium, UCLA, Los Angeles, CA, 11 February 2003.
191. “Understanding Molecular Scale Electronic Transport”, NANOMES 2003, Phoenix, AZ, 18 February 2003.
192. “Understanding Molecular Scale Electronic Transport”, Colloquium, University of Connecticut, Storrs, CT, 24 February 2003.
193. “The Fabrication and Measurement of Molecular Electronic Devices”, Colloquium, Army Research Lab, Aberdeen, MD, 26 February 2003.
194. “The Coming of Age of Nanoelectronics”, Colloquium, Yeshiva University, New York City, NY, 24 March 2003.
195. “Atomic and Molecular Scale Electronic Transport”, Colloquium, University of Chicago, Chicago, IL, 8 April 2003.
196. “Understanding Molecular Scale Electronic Transport”, Interfaces Conference – Symposium on Mol. E, San Juan, PR, 7 May 2003.
197. “Atomic and Molecular Scale Electronic Transport”, NANO 2003, Groningen, Netherlands, 20 May 2003.
198. “Atomic and Molecular Scale Electronic Transport”, PASI Summer School lecture series, Bariloche, Argentina, 16-18 June 2003.
199. “Understanding Molecular Scale Electronic Transport”, Kwiram Symposium, University of Washington, Seattle, WA, 24 June 2003.

200. "Atomic and Molecular Scale Electronic Transport", Krupp Suymposium, Konstanz, Germany, 7 July 2003.
201. "Atomic and Molecular Scale Electronic Transport", Bio-Inspired Workshop, Georgia Tech, Atlanta, GA, 19 August 2003.
202. "Understanding Molecular Scale Electronic Transport", IBM Zurich Research Labs, Zurich, Switzerland, 12 September 2003.
203. "Understanding Molecular Scale Electronic Transport", International DPG School of Physics, Bad Honnef, Germany, 15 September 2003.
204. "Understanding Molecular Scale Electronic Transport", Colloquium, GE Global Research, Niskayuna, NY, 15 September 2003.
205. "What Nanotech Isn't, What Nanotech Is", CT Nanotech Symposium, Storrs, CT, 16 October 2003.
206. "Beyond the Brick Wall: Off Road Map Technologies", CT Nanotech Symposium, Storrs, CT, 16 October 2003.
207. "Revolutionary Devices", SRC Workshop, Portland, OR, 30 October 2003
208. "Understanding Molecular Scale Electronic Transport", The Fourth Dartmouth Molecular Materials Symposium", Lebanon, NH, 1 November 2003.
209. "Understanding Molecular Scale Electronic Transport", Kopelmann Symposium, University of Michigan, Ann Arbor, MI, 14 November 2003
210. "Understanding Molecular Scale Electronic Transport", Molecular Electronics Symposium, University of South Carolina, Columbia, SC, 21 November 2003
211. "Mechanism of Electron Conduction in Self-Assembled Alkanethiol Monolayer Devices", MRS Fall Meeting, Boston, MA, 1 December 2003
212. "Intrinsic Electron Tunneling in Molecular Systems", Colloquium, University of Pittsburgh, Pittsburgh, PA, 16 January 2004.
213. "Revolutionary Devices", NNI Grand Challenges Workshop, Arlington, VA, 12 February, 2004.
214. "A Decade of Molecular Scale Transport", Plenary Talk, International Workshop on Advances in Molecular Electronics, and combined MPI Colloquia, Dresden, Germany, 23 February 2004. (**Plenary talk**)
215. "Electronic Transport in Molecular Scale Systems", NanoTech 2004, Boston, MA, 9 March 2004.
216. "Intrinsic Electron Conduction Mechanisms in Molecules", Boston College NanoScience Workshop, Boston, MA, 20 March 2004.
217. "Intrinsic Electron Conduction Mechanisms in Molecules", March APS Meeting, Montreal, Canada, 22 March 2004.
218. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, SUNY Albany Nanotech Center, Albany, NY, 26 March 2004.

219. "Intrinsic Electron Conduction Mechanisms in Molecules", NanoSymposium Colloquia, NYU, New York, NY, 20 April 2004.
220. "Intrinsic Electron Conduction Mechanisms in Molecules", Foundations of Nanoscience Conference, Snowbird, UT, 22 April 2004.
221. "Intrinsic Electron Conduction Mechanisms in Molecules", XXVII Encontro Nacional de Física da Matéria Condensada (27th Meeting of the Brazilian Condensed Matter Physical Society), Poco de Caldas, Brazil, 5 May 2004. **(Plenary talk)**
222. "Intrinsic Electron Conduction Mechanisms in Molecules", LANL CNLS 24th Annual Conference, Santa Fe, NM, 17 May 2004.
223. "Intrinsic Electron Conduction Mechanisms in Molecules", Seminar, Sandia National Labs, Albuquerque, NM, 18 May 2004.
224. "Intrinsic Electron Conduction Mechanisms in Molecules", DAMOP, Seminar, Tucson, AZ, 27 May 2004.
225. "Intrinsic Electron Conduction Mechanisms in Molecules", Molecular Conduction Workshop, Evanston, IL, 9 July 2004.
226. "Intrinsic Electron Conduction Mechanisms in Molecules", Gordon Research Conference, Mt. Holyoke College, South Hadley, MA, 25 July 2004.
227. "Inelastic Electron Tunneling Spectroscopy of an Alkane SAM", IEEE Nano 2004, Munich, Germany, 18 August 2004.
228. "Atomic and Molecular Scale Electronic Transport", Nano Korea 2004, Seoul, S. Korea, 24 August 2004 **(Keynote plenary talk)**.
229. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, Gwangju Institute of Science and Technology, Gwangju, S. Korea, 25 August 2004.
230. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, Columbia University, New York, NY, 8 September 2004.
231. "Atomic and Molecular Scale Electronic Transport", ICI Technical Meeting, Bridgewater, NJ, 20 September 2004.
232. "Molecular Electronics", IBM Post-CMOS Workshop, Yorktown Heights, NY, 22 September 2004.
233. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, Northwestern University, Evanston, IL, 4 October 2004.
234. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, AFRL, Rome, NY, 25 October 2004.
235. "Semiconducting Nanowires", Next Generation Electronics Workshop, ARL, Fort Derrick, MD, 5 November 2004.
236. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, AFRL, Rome, NY, 25 October 2004.

237. "Intrinsic Electron Conduction Mechanisms in Molecules", QTSM/QFS Symposium, Phoenix Park, S. Korea, 21 November 2004. **(Plenary talk)**.
238. "GaN Nanowires", AHW 2004, Kohala, HI, 10 December 2004.
239. "Self-Assembled Monolayer Molecular Devices", IEDM 2004, San Francisco, CA, 14 December 2004.
240. "Nanoelectronics: Now or Never?", Panel presentation IEDM 2004, San Francisco, CA, 14 December 2004.
241. "Intrinsic Electron Conduction Mechanisms in Molecules", ICNME, Kobe, Japan, 17 December 2004. **(Plenary talk)**.
242. "A Retrospective of Molecular-Scale Electronics: Special Session in Honor of Ari Aviram", 7th International Conference on Molecular-Scale Electronics, San Diego, CA, 23 January 2005.
243. "Atomic and Molecular Scale Electronic Transport", Eminent Speaker Series, University of Virginia, Charlottesville, VA, 4 February 2005.
244. "Intrinsic Electron Conduction Mechanisms in Molecules", Colloquia, University of Washington, Seattle, WA, 1 March 2005.
245. "Intrinsic Electron Conduction Mechanisms in Molecules", Seminar, NRC, Ottawa, Canada, 22 April 2005.
246. "Nano and Molecular Electronics", Tutorial at NanoTech 2005, Anaheim, CA, , 7 May 2005.
247. "Future Electronics", Emerging Technologies Conference, MIT, Cambridge, MA, 29 September 2005.
248. "What Nanotech Isn't, What Nanotech Is", National Association of Science Teachers, Hartford, CT, 20 October 2005.
249. "Atomic and Molecular Scale Electronic Transport", Welch Foundation Chemical Conference, Houston, TX, 25 October, 2005.
250. "Low-Dimensional Electronic Devices: The Future of Electronics", Nanotechnology Lecture Series, Connecticut College, New London, CT, 7 November 2005.
251. "Electronic Transport in Molecular-Scale Systems", CIAR, UCSB, Santa Barbara, CA, 11 November 2005.
252. "Intrinsic Electron Conduction Mechanisms in Molecules", PacificChem 2005, Honolulu, HI, 18 December 2005.
253. "Atomic and Molecular Scale Electronic Transport", Colloquia, UT Austin, Austin, TX, 23 March 2006.
254. "Electronic and Photonic Transport in Nanowires", CMOC Symposium, University of Connecticut, Storrs, CT, 5 April 2006.

255. "The Future of Electronics", New England Society of Physics Students Meeting, SCSU, New Haven, CT, 8 April 2006.
256. "Spectroscopy of Molecular Tunnel Junctions", MRS Spring Meeting, San Francisco, CA, 19 April 2006.
257. "Nano and Molecular Electronics", Tutorial short course at NanoTech 2006, Boston, MA, 7 May 2006.
258. "Atomic and Molecular Scale Electronic Transport", Leermakers Symposium, Wesleyan U., Middletown, CT, 11 May 2006.
259. "Electronic Transport in Molecules and Nanowires", Nanomaterial Modeling Workshop, NIST, Gaithersburg, MD, 25 May 2006.
260. "Electronics Off The Roadmap: What Happens After 2016?", Tutorial short course at ICONN 2006, Brisbane, Australia, 3 July 2006.
261. "Atomic and Molecular Scale Electronic Transport", ICONN 2006, Brisbane, Australia, 5 July 2006. (**Plenary talk**).
262. "Semiconducting and Metallic Nanowires: Molecular Sensing and NanoOptics", ICN+T 2006, Basel, Switzerland, 3 August 2006. (**Plenary talk**).
263. "Nanojunctions and Nanowires: Molecular Spectroscopy, Sensing and NanoOptics", 210th Meeting of the ECS, Cancun, Mexico, 2 November 2006.
264. "Bots, dots, and watts", LANL Conference on Expanding Horizons: The Scientific Legacy of Brosl Hasslacher", Los Alamos, New Mexico, 4 November 2006.
265. "Square Pegs & Round Holes - Using Molecules And Devices For What They're Good At", CIAR, Banff, Canada, 11 November 2006.
266. "CMOS-Integrable Semiconductor Nanowires for Specific Label-Free Detection", AHW 2006, Kohala, HI, 4 December 2006.
267. "IETS of Alkane SAMs", CECAM Workshop (Inelastic effects in transport at the atomic scale: from realistic current simulations to chemical detection at the atomic scale via IET spectroscopy), Lyon, France, 18 December 2006.
268. "Electronics off the roadmap: what happens after 2016?", Colloquia, University of Tennessee, Knoxville, TN, 13 February 2007.
269. "Biodetection with CMOS-Compatible Semiconducting Nanowire Sensors", International Workshop on Advanced Materials and Technologies for Nano and Oxide Electronics, New Delhi, India, 22 February 2007.
270. "Electronics off the roadmap: what happens after 2016?", Tutorial shortcourse, Nano and Giga Challenges in Electronics and Photonics, Tempe, AZ, 12 March 2007.
271. "Biodetection with CMOS-Compatible Semiconducting Nanowire Sensors", Nano and Giga Challenges in Electronics and Photonics, Tempe, AZ, 16 March 2007.
272. "CMOS-Compatible Semiconducting Nanowire Sensors", seminar, IBM, Yorktown Heights, NY, 19 March 2007.

273. "The Limits of Charge-Based Electronics", CIAR Colloquium, Mont Tremblant, QC, Canada, 14 April 2007.
274. "Interfacing Biosystems with Microelectronics", CIAR Colloquium, Mont Tremblant, QC, Canada, 14 April 2007.
275. "Biodetection with CMOS-Compatible Semiconducting Nanowire Sensors", seminar, Bristol-Myers Squibb, Wallingford, CT, 30 April 2007.
276. "Biodetection with CMOS-Compatible Semiconducting Nanowire Sensors", ICMAT, Singapore, 4 July 2007.
277. "The Next Frontier: Bioelectronic Interfaces", IEEE Nano 2007, Hong Kong, China, 5 August 2007. (**Plenary talk**).
278. "Plasmonic Waveguides: A New Approach to Sub-Wavelength Optics", ICOOPMA 2007, London, UK, 31 July 2007.
279. "Atomic and Molecular Scale Electronic Transport", Nanolink 2007, Tokyo, Japan, 18 August 2007. (**Plenary talk**).
280. "Challenges of the 21st Century", Wheler Conference on World Affairs, Cazenovia College, Cazenovia, NY, 10 September 2007.
281. "Biodetection with CMOS-Compatible Semiconductor Nanowire Sensors", ICON 2007, Malmo, Sweden, 29 September 2007.
282. "Biodetection with CMOS-Compatible Semiconductor Nanowire Sensors", Colloquia, University of Copenhagen, Copenhagen, Denmark, 1 October 2007.
283. "The Next Frontier: Bioelectronic Interfaces", MIT Nanotechnology Public Lecture Series, MIT, Cambridge, MA, 24 October 2007.
284. "BioFET Sensors for the living cell", SRC Forum on Nanomorphic Systems, Stanford University, Palo Alto, CA, 8 November 2007.
285. "Label-Free Sensing with Silicon Nanowires", 2007 Scientific Conference on Chemical & Biological Defense Research, Timonium, MD, 14 November 2007.
286. "Label-Free Sensing with Silicon Nanowires", Villa Conference on Interaction Among Nanostructures, Orlando, FL, 4 February 2008.
287. "Nanotechnology in the Future of Engineering and Science", Keynote address, Tau Beta Pi award ceremony, Fairfield University, Fairfield, CT, 23 February 2008.
288. "Biodetection with Semiconductor Nanowires", Colloquia, Michigan Technical University, Houghton, MI, 2 April 2008
289. "Plasmonic Waveguides & Heterostructures", CIFAR Colloquium, Montreal, QC, Canada, 17 April 2008.
290. "The Next Frontier: Bioelectronic Interfaces", Colloquia, KTH, Royal Institute of Technology, Kista, Sweden, 24 April 2008.

291. "Label-Free Sensing with Silicon Nanowires", 8th Annual International Center for Quantum Structures (ICQS) Workshop, Beijing-Changchun, China. 11 June 2008 (Beijing), 12 June 2008 (Changchun).
292. "Electronic Label-Free Sensing", JNN Summer School, Montreal, Canada, 19 June 2008.
293. "The Next Frontier: Bioelectronic Interfaces", WE Heraeus Physics Summer School on Functional Hybrid Materials Design, Bremen, Germany, 24 June 2008.
294. "The Next Frontier: Bioelectronic Interfaces", Colloquia, University of Bremen, Bremen, Germany, 26 June 2008.
295. "Wired for Bio: Plugging into the Biochemical System of Cells", Gordon Conference on Nanostructure Fabrication, Tilton, NH, 13 July 2008.
296. "Nano/Bio-fabrication Technologies", MITRE Shortcourse on NanoBio-technologies, McLean, VA, 23 July 2008.
297. "Nanotechnology 101", Nanotechnology workshop for Teachers, SCSU, New Haven, CT, 28 July 2008. (* K12 outreach)
298. "Atomic Physics with Single Impurities", "Julius Springer Forum on Applied Physics 2008", Harvard University, Cambridge, MA, 27 September 2008.
299. "Wired for Bio: Plugging into the Biochemical System of Cells", Colloquia, Wellsley College, Wellsley, MA, 29 September 2008.
300. "Challenges of the 21st Century (Through the Eyes of a Scientist)", Amity High School, Woodbridge, CT, 2 October 2008. (* K12 outreach)
301. "The Next Frontier: Bioelectronic Interfaces", 1st China Jiangsu Conference (CITTC), Nanjing, China, 6 November 2008.
302. "The Next Frontier: Bioelectronic Interfaces", Nano Tech Suzhou 2008, Suzhou, China, 8 November 2008.
303. "Nanowire Plasmon Waveguides and Junctions", Chemical and Biological Defense Physical Science Technology Conference, New Orleans, LA, 19 November 2008.
304. "Label-Free Sensing with Silicon Nanowires", WE Heraeus Seminar, Bad Honnef, Germany, 26 January 2009.
305. "Label-Free Sensing with Silicon Nanowires", NIM/CeNS Winterschool, St. Anton, Austria, 3 March 2009.
306. "Label-Free Sensing with Silicon Nanowires", PittConn 2009, Chicago, IL, 9 March 2009.
307. "Label-Free Sensing with Silicon Nanowires", ISTC/CSTIC 2009, Shanghai, China, 20 March 2009.
308. "Nanowire FET Biomolecular Sensors", MRS Spring Meeting, San Francisco, CA, 17 April 2009.

309. "Nanowire FET Biomolecular Sensors", US/Korea NanoForum 2009, Las Vegas, NV, 29 April 2009.
310. "From Atomic and Molecular Electronics to Biointerfaces", Colloquia, GIST, "Gwangju, S. Korea, 20 May 2009.
311. "Biomolecular electronics: the next frontier", International Conference on Molecular Electronics and Devices, 20th anniversary (IC MED 20), Seoul, S. Korea, 22 May 2009. (**Plenary talk**).
312. "Label-Free Sensing with Silicon Nanowires", ULSI vs TFT, Xi'an, China, 10 July 2009.
313. "Label-Free Sensing with Silicon Nanowires", RQMP Summerschool, Jouvence, Canada, 21 August 2009.
314. "Nanowire Biosensors", IEEE NJ EDS/C&S Chapter meeting, Newark, NJ, 17 September, 2009 (EDL Distinguished Lecture)
315. "Electronics off the roadmap: what happens after 2016?", colloquia, Texas A&M Univ., College Station, TX, 25 September 2009.
316. "Molecular Transistors", CIFAR Fall09 Nanoelectronics Program Meeting, Quebec City, Quebec, Canada, 17 November 2009.
317. "CMOS Nanowire FET Biosensors", MRS Fall Meeting, Boston, MA, 1 December 2009.
318. "Label-Free Biosensing with Silicon CMOS Nanowires", Third International Conference on One-dimensional Nanomaterials (ICON 2009), Atlanta, GA, 8 December 2009 (**Plenary talk**).
319. "Label-Free Sensing with Silicon Nanowires", Physics@FOM, Veldhoven, Netherlands, 19 January 2010.
320. "CMOS Nanowire Biosensor Systems", Philips seminar, Eindhoven, Netherlands, 21 January 2010.
321. "Molecular Transistors", TU Eindhoven seminar, Eindhoven, Netherlands, 21 January 2010.
322. "CMOS Nanowire Biosensors", IBM seminar, Yorktown Heights, NY, 1 February 2010.
323. "CMOS Nanowire Biosensor Systems", U. Rochester seminar, Rochester, NY, 10 February 2010.
324. "Molecular Transistors", McGill U. seminar, Montreal, Canada, 12 February 2010.
325. "Molecular Transistors", Sanibel Workshop, St. Simons Island, GA, 24 February 2010. (**Plenary talk**)
326. "Molecular Transistors", Army Research Labs seminar, Aberdeen, MD, 30 March 2010.

327. "CMOS Nanowire Biosensor Systems", Columbia U. seminar, NY, NY, 31 March 2010.
328. "CMOS Nanowire Biosensor Systems", U. Copenhagen UNIK meeting on Synthetic Biology, Ringsted, Denmark, 15 April 2010.
329. "Molecular Transistors", U. Copenhagen seminar, Copenhagen, Denmark, 19 April 2010.
330. "Electronics off the roadmap: To the End of the Roadmap, & Beyond", CM60@SU, Syracuse University, Syracuse, NY, 24 April 2010.
331. "CMOS Nanowire Biosensor Systems", Caltech seminar, Pasadena, CA, 5 May 2010.
332. "CMOS Nanowire Biosensor Systems", CifAR meeting, Napa Valley, CA, 11 May 2010.
333. "CMOS Nanowire Biosensor Systems", Gordon Conference on Bioanalytical Sensors, New London, NH, 21 June 2010.
334. "CMOS Nanowire Biosensor Systems", New England Section of the APS/AAPT, Brown University, Providence, RI, 29 October 2010.
335. "CMOS Nanowire Biosensor Systems", International Conference on Solid-State and Integrated Circuit Technology, Shanghai, China, 3 November 2010.
336. "Molecular Transistors", Workshop on Innovative Devices and Systems, Kohala, HI, 6 December 2010.
337. "CMOS Nanowire Biosensors", Workshop on Innovative Devices and Systems, Kohala, HI, 10 December 2010.
338. "Molecular Transistors", Colloquia, National Taiwan University, Taipei, Taiwan, 24 January 2011.
339. "CMOS Nanowire Biosensor Systems", Taiwan AVS meeting, National Taiwan University, Taipei, Taiwan, 26 January 2011.
340. "CMOS Nanowire Biosensor Systems", Taiwan AVS meeting, National Taiwan University, Taipei, Taiwan, 26 January 2011.
341. "CMOS Nanowire Biosensor Systems", Colloquia, Delft University of Technology, Delft, Netherlands, 7 February 2011.
342. "CMOS Nanowire Biosensor Systems", ICSN, Mumbai, India, 15 February 2011.
343. "CMOS Nanowire Biosensor Systems", Colloquia, TAMU, College Station, TX, 10 March 2011.
344. "Orbital Gating of Single Molecule Transistors", March APS, Dallas, TX, 22 March 2011.
345. "When Electronics Drives Off The Roadmap: More Moore, & More Than Moore", CifAR meeting, Mont Tremblant, Canada, 29 March 2011.

346. “CMOS Nanowire Biosensor Systems”, WMED, Boise, ID, 22 April 2011.
347. “CMOS BioFET Physics and Applications”, Spring MRS, San Francisco, CA, 28 April 2011.
348. “CMOS Compatible Nanowires for Biosensing”, Design Automation Conference, San Diego, CA, 9 June 2011.
349. “Label-free Sensing with Silicon Nanowires”, Russian-American Workshop on Bioelectronics, St. Petersburg, Russia, 28 June 2011.
350. “Coherent Transport and Resonant Coupling in Molecule Transistors”, NanoGiga Conference 2011, Moscow, Russian Federation, 14 September 2011 (**Plenary talk**).

PATENTS (granted)

1. EP0170044 02/05/1986 Quantum-coupled device
2. US4575924 03/18/1986 Process for fabricating quantum-well devices
3. US4581621 04/08/1986 Quantum device output switch
4. EP0216155 04/01/1987 Three-terminal tunneling device
5. US4705361 11/10/1987 Spatial light modulator
6. US4783427 11/08/1988 Process for fabricating quantum-well devices
7. US4799091 01/17/1989 Quantum device output switch
8. US4851886 07/25/1989 Binary superlattice tunneling device and method
9. US4878104 10/31/1989 Optically pumped quantum coupled devices
10. US4912531 03/27/1990 Three-terminal quantum device
11. US4959696 09/25/1990 Three terminal tunneling device and method
12. US4969018 11/06/1990 Quantum-well logic using self-generated potentials
13. US5059545 10/22/1991 Three terminal tunneling device and method
14. US5165065 11/17/1992 Optically pumped quantum coupled devices
15. EP0668618 08/23/1995 Resonant tunneling devices
16. US5475341 12/12/1995 Sub-nanoscale electronic systems and devices
17. US5589692 12/31/1996 Sub-nanoscale electronic systems and devices
18. US5751156 05/12/1998 Mechanically controllable break transducer
19. US6320200 11/20/2001 Sub-nanoscale electronic devices and processes
20. US6430511 08/06/2002 Molecular computer
21. US6608386 08/19/2003 Sub-nanoscale electronic devices and processes
22. EP0643883 10/01/2003 Sub-nanoscale electronic circuit and process
for manufacturing the same
23. US6699697 03/02/2004 Planar patch clamp electrodes
24. US6756605 06/29/2004 Molecular scale electronic devices
25. US7015336 03/21/2006 Sub-nanoscale electronic devices and processes

PATENT APPLICATIONS (of note)

1. US App. 20030207467 Protein chips for high throughput screening of protein activity (licensed to Invitrogen)
2. US App. 20100297608 Systems and Methods for CMOS-Compatible Silicon Nanowire Sensors with Biochemical and Cellular Interfaces.
3. US App. 20100184104 Nanoelectronic Enzyme-Linked Immunosorbent Assay System and Method.