

Joseph A. Stroscio

Biography of Joseph A. Stroscio

Joseph Stroscio is a NIST Fellow and Project Leader in the Physical Measurement Laboratory (PML) at NIST. He received a B.S. and an M.S. in Physics from the University of Rhode Island, and a Ph.D. in Physics from Cornell University. Stroscio's passion in instrument design began during his graduate work in Professor Wilson Ho's group at Cornell University, where he designed and constructed most of the instrument hardware and electronics for his thesis research [[RSI 55, 732 \(1984\)](#); [55, 1672 \(1984\)](#); [57, 1483 \(1986\)](#)]. At Cornell, Stroscio performed pioneering studies of surface phonon and plasmon excitations with low energy electron energy loss spectroscopy where he discovered a new class of surface phonons related to pseudo-gaps in the bulk phonon spectrum of fcc(110) surfaces [[PRL 54, 1428 \(1985\)](#)], and he showed how quasi-elastic electron scattering can probe the near surface region of semiconductor surfaces [[PRL 54, 1573 \(1985\)](#); [PRB 36, 9736 \(1987\)](#)].

Upon leaving Cornell, Stroscio worked as a postdoctoral researcher at the IBM T. J. Watson Research Center, where he pioneered the development of scanning tunneling microscopy (STM) and spectroscopy measurements with Dr. Randal Feenstra in the mid-1980s, when ultra-high vacuum (UHV) scanning tunneling microscopy (STM) was just beginning. During this period Stroscio made several ground-breaking scientific achievements. He performed some of the first UHV scanning tunneling spectroscopy measurements, which showed that the STM does not simply image atoms but measures the energy-resolved electronic wavefunction probability distributions. He demonstrated this with elegant measurements of the Si(111)2x1 surface, showing that the atomic-like features undergo a 180° phase reversal when imaging the Si(111)2x1 π -bonded chain structure at energies below and above the Si(111)2x1 band gap. This represented the characteristic parity of the surface state wavefunctions [[PRL 57 2579 \(1986\)](#)]. In this work, Stroscio introduced the concept of the normalized differential tunneling conductance as a measure of the energy-resolved local density of electronic states, and showed its correspondence to the Si(111)2x1 surface state band structure. He continued to focus work on tunneling spectroscopy studies of semiconductor surfaces during this period, and showed how quantitative analysis of semiconductor spectra can be achieved with varying tip-sample distance methods [[Surface Science 181, 295 \(1987\)](#), [JVST B 5, 923 \(1987\)](#), [JVST A 6, 499 \(1988\)](#)]. Taking advantage of the knowledge he gained, Stroscio performed the first tunneling measurements which demonstrated chemical selective imaging with measurements on the GaAs(110) surface, showing how to tune and image Ga versus As atom electronic states [[PRL 58, 1192 \(1987\)](#)]. In addition, he demonstrated how adsorbates on semiconductor surfaces effect band-bending and screening on an atomic scale [[PRL 58, 1668 \(1987\)](#)].

After leaving IBM, Stroscio joined NIST in 1987 to lead the scanning tunneling microscopy effort in the Electron Physics Group at NIST. At NIST, his initial studies continued to pioneer the applications of scanning tunneling spectroscopy involving studies of low-dimensional alkali systems on semiconductor surfaces [[PRB 42, 7288 \(1990\)](#), [PRL 66, 1338 \(1991\)](#), [PRB 44, 5951 \(1991\)](#)], as well as expanding into the nanoscale science of film growth and epitaxy with some of the first measurements on island scaling and layer-by-layer epitaxy [[JVST A 10, 1981 \(1992\)](#), [PRL](#)

[70, 3615 \(1993\)](#), [PRB 49, 14564 \(1994\)](#), [PRB 49, 8522 \(1994\)](#)]. Stroschio's work in metal systems elucidated low energy surface states with appreciable tunneling intensities on Fe(001) and Cr(001) surfaces [[PRL 75, 2960 \(1995\)](#), [PRL 76, 4175 \(1996\)](#)], which are now widely used for spin-polarized spectroscopy measurements by the STM community. He performed some of the first measurements of atomic manipulation with STM, showing how alkali atom motion on III-V(110) surfaces can be induced from the electric field of the probe tip [[Science 251, 1206 \(1991\)](#); [254, 1319 \(1991\)](#)]. He explained how "sounds" in the tunneling current during single atom manipulation result from telegraph noise in the tunneling current during atom manipulation. In this work, he showed how tunneling noise spectroscopy could be used to probe the potential energy surfaces for adatoms [[Science, 306, 242 \(2004\)](#)]; later measurements by colleagues in the STM community used his methods to determine the spin-dependent friction in atomic manipulation.

Stroschio has spent the last decade at NIST making notable measurements on the single layer graphene two-dimensional electron system and related 2D topological insulator materials, involving over 40 [publications](#). His initial work in this area focused on the role of defects and the role of the graphene pseudo-spin in backscattering [[Science 317, 219 \(2007\)](#), [PRB 81, 125427 \(2010\)](#), [PRB, 83, 195425 \(2011\)](#)]. Using instruments he developed with magnetic field capability and low temperatures, he was able to obtain the first measurements of the unique graphene Landau level states [[Science 324, 924 \(2009\)](#)], pseudo-magnetic fields in strained suspended graphene membranes [[Science 336, 1557 \(2012\)](#)], the graphene phonon spectrum with inelastic tunneling spectroscopy [[PRL 114, 245502 \(2015\)](#)], and proximity coupled superconducting graphene [[PRB 93, 045406 \(2016\)](#)]. He further developed tunneling spectroscopic and fabrication techniques to study micron-sized graphene devices with the STM, enabling mapping of electron states as a function of graphene carrier density, energy, and magnetic field. These techniques, allowed Stroschio to study localization in graphene [[Nature Physics 7, 245 \(2011\)](#)], polarization in bi-layer graphene [[Nature Physics, 7, 649 \(2011\)](#)], and the renormalization of the Dirac conical dispersion [[PRL 109, 116802 \(2012\)](#)] with unmatched quality. With even more advanced instruments he developed, Stroschio resolved both spin and valley degeneracies in tunneling spectroscopy of graphene at mK temperatures [[Nature 467, 185 \(2010\)](#)]. His most recent work in the graphene system involved creating *pn* junction resonators, where he discovered the whispering gallery modes of Dirac fermions resulting from Klein scattering [[Science 348, 672 \(2015\)](#)], and a new quantum Berry phase switch of resonator states in graphene [[Science 356, 845 \(2017\)](#)], using advanced spectroscopic measurements he developed in his laboratory.

Stroschio's ability to advance measurement science stems from his creativity in instrument development. Throughout his career Stroschio has had a passion for instrument design, creating some of the most advanced [scanning probe microscopes](#) operating in the world today. He has combined his UHV experience with cryogenic techniques, enabling measurements in extreme environments of UHV, ultra-low temperature, and high magnetic field. He has distributed this knowledge in many publications in *Review of Scientific Instruments*, starting in his graduate school days and continuing to today. Two cryogenic SPM instruments are described in invited review articles [[RSI 81, 121101 \(2010\)](#); [85, 121301 \(2014\)](#)]. His STM instrument designs involving mK temperatures have now opened the door to measurements with μeV resolution, allowing the STM not only to have exceeding high spatial resolution, but now exceedingly high energy resolution as well. His designs have started a renaissance in STM instrument development, with many laboratories and companies all over the world copying his lead. Stroschio's current instrumentation

focus is to make similar advances in atomic force microscopy, striving to make the “coolest” AFM in the world. He recently succeeded in combining atomic force microscopy capability with STM at mK temperatures with Prof. Franz Giessibl from Regensburg University [[RSI 91, 071101 \(2020\)](#)] and applied the combined measurement modalities to measuring graphene quantum Hall edge states [[Nat Commun 12, 2852 \(2021\)](#)].

Stroscio has coauthored over 100 publications with over 15,000 citations ([google scholar citations](#)), and has given more than 300 presentations. He is a Fellow of the American Association for the Advancement of Science (AAAS), the American Physical Society (APS), the American Vacuum Society (AVS). He has received the Arthur S. Flemming Award, the Department of Commerce Silver and Gold Medal Awards, the Sigma Xi Young Scientist Award, the Nano50 Award, the AVS Nanotechnology Recognition Award, and the NIST Samuel Wesley Stratton Award. He is a recipient of the Presidential Rank Award, the Heinrich Rohrer Grand Medal, and the APS Joseph F. Keithley award. He has served on numerous committees of the AVS, APS, and on the Editorial Board of the *Review of Scientific Instruments*.

Joseph A. Stroscio

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Education

Cornell University, Ithaca, New York

Doctor of Philosophy Degree, 1986

Department of Physics

Thesis title: *High Resolution Electron Energy Loss Spectroscopy of Surface Excitations*

Thesis Advisor: Professor Wilson Ho

Master of Science Degree, 1983

University of Rhode Island, Kingston, RI

Master of Science Degree, 1980

Department of Physics

Thesis title: *The Rotational Viscosity of a Reentrant Nematic Liquid Crystal*

Thesis Advisor: Professor Stephen Letcher

Bachelor of Science Degree, 1978 (Highest Distinction)

Relevant Experience

National Institute of Standards and Technology, Gaithersburg, Maryland

NIST Fellow, August 2007 - Present

Physicist, November 1987 – August 2007

Project leader in quantum nanoscience research using advanced scanning probe microscopy techniques.

IBM T.J. Watson Research Center, Yorktown Heights, NY

Postdoctoral Research Associate, October 1985 – November 1987

Pioneered research in scanning tunneling microscopy and spectroscopy of semiconductor surfaces with R. M. Feenstra.

Cornell University, Ithaca, New York

Graduate Research Assistant, June 1981 – October 1985

Research in high-resolution electron energy loss spectroscopy of surface excitations with Professor Wilson Ho.

Cornell University, Ithaca, New York

Teaching Assistant, September 1980 – October 1982

Undergraduate physics laboratory and recitation instruction, Kinematics under Professor Robert Cotts and Electricity and Magnetism under Professor Robert Pohl.

University of Rhode Island, Kingston, RI

Graduate Research Assistant, September 1978 –September 1980

Research in the physics of liquid crystal phase transitions using ultrasonics with Professor Stephen Letcher.

**Awards/
Honors**

- American Physical Society Joseph F. Keithley award, 2018
- Heinrich Rohrer Grand Medal Prize, 2017
- Presidential Rank Award, 2015
- NIST Samuel Wesley Stratton Award, 2012
- Elected to Fellowship, American Association for the Advancement of Science 2010
- AVS NSTD Nanotechnology Recognition Award, October 2009
- Nano50 Award, 2006
- United States Department of Commerce Gold Medal Award, 2005
- Elected to Fellowship, American Physical Society, 2002
- Elected to Fellowship, American Vacuum Society, 1997
- Arthur S. Flemming Award, 1995
- United States Department of Commerce Silver Medal Award, 1993
- Sigma Xi Young Scientist Award, 1992
- American Vacuum Society Poster Award, 1984
- Materials Research Society Student Award, 1983
- URI Academic Excellence Award in Physics, 1978
- Elected to Society of Sigma Pi Sigma, 1977
- Elected to Society of Phi Kappa Phi, 1977

**Professional
Activities/
Technical
Committees**

- Editorial Board, Review of Scientific Instruments, 2015-2018
- Elected Steering Committee Chair, International Conference on Nanoscience and Technology, ICN+T, 2016
- International Program Advisory Board, The 8th International Symposium on Surface Science (ISSS-8), October, 2017.
- Focus session organizer, Group on Instrumentation and Measurement Science, March Meeting of the American Physical Society, 2012-2016.
- Program Committee, International Conference on Nanoscience and Technology, ICN+T, 2014
- Scientific Advisory Committee member, Brookhaven National Laboratory, Center for Functional Nanomaterials, 2012-2016
- Chair, American Physical Society Keithley Award Committee, 2011
- Chair, Topical Group on Instrument and Measurement Science, American Physical Society, 2010.
- Program Chair and Chair Elect, Topical Group on Instrument and Measurement Science, American Physical Society, 2009.
- Chair, International Conference on Nanoscience and Technology, ICN+T, 2008.
- Vice-Chair Topical Group on Instrument and Measurement Science, American

Physical Society, 2008

- Executive Committee member Magnetic Interfaces and Nanostructures, American Vacuum Society, 2002-2005
- Editorial Board member of *Review of Scientific Instruments*, 2002-2005
- Executive Committee member Topical Group on Instrument and Measurement Science, American Physical Society, 2002-2008
- Chair, Nanometer-Scale Science and Technology Division, American Vacuum Society, 1994-1995
- Vice-Chair, Nanometer-Scale Science and Technology Division, American Vacuum Society, 1993-1994
- Chairman Program Committee, Nanometer-Scale Science and Technology Division, American Vacuum Society 40th National Symposium, Orlando, FL, November 1992-1993
- Founding Board Member of the Nanometer-Scale Science and Technology Division of the American Vacuum Society, August, 1992
- Member Morton M. Traum Award Committee American Vacuum Society 39th National Symposium, Chicago, IL, November 1992
- Organizing Committee member, 50th Annual Conference on Physical Electronics, NIST, Gaithersburg, MD, June 1990

Selected Publications

- *Electronic Structure of the Si(111) 2x1 Surface by Scanning Tunneling Microscopy*, J. A. Stroscio, R. M. Feenstra, and A. P. Fein, *Physical Review Letters* [57, 2579 \(1986\)](#)
- *Atom-selective Imaging of the GaAs(110) Surface*, R. M. Feenstra, J. A. Stroscio, J. Tersoff, and A. P. Fein, *Physical Review Letters* [58, 1192 \(1987\)](#)
- *Geometric and Electronic Properties of Cs Structures on III-V (110) Surfaces: From 1-D and 2-D Insulators to 3-D Metals*, L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, *Physical Review Letters* [66, 1338 \(1991\)](#)
- *Atomic and Molecular Manipulation With the Scanning Tunneling Microscope*, J. A. Stroscio and D. M. Eigler, *Science* [254, 1319 \(1991\)](#)
- *Tunneling Spectroscopy of bcc(001) Surface States*, J. A. Stroscio, D. T. Pierce, A. Davies, and R. J. Celotta, *Physical Review Letters* [75, 2960 \(1995\)](#)
- *Controlling the Dynamics of A Single Atom in Lateral Atom Manipulation*, J. A. Stroscio and R. J. Celotta, *Science* [306, 242 \(2004\)](#)
- *Electronically Induced Atom Motion in Engineered CoCu Nanostructures*, J. A. Stroscio, F. Tavazza, J. N. Crain, R. J. Celotta, and A. M. Chaka, *Science* [313, 948 \(2006\)](#)
- *Observing the Quantization of Zero Mass Carriers in Graphene*, David L. Miller, Kevin D. Kubista, Gregory M. Rutter, Ming Ruan, Walt A. de Heer, Phillip N. First, and Joseph A. Stroscio, *Science* [324, 924 \(2009\)](#)
- *High Resolution Tunneling Spectroscopy of a Graphene Quartet*, Young Jae Song, Alexander F. Otte, Young Kuk, Yike Hu, David B. Torrance, Phillip N. First, Walt A. de Heer, Hongki Min, Shaffique Adam, Mark D. Stiles, Allan H. MacDonald, and Joseph A. Stroscio, *Nature* [467, 185 \(2010\)](#)
- *A 10 mK scanning probe microscopy facility*, Y. J. Song, A. F. Otte, V. Shvarts, Z.

- Zhao, Y. Kuk, S. R. Blankenship, A. Band, F. M. Hess, and J. A. Stroscio, *Invited Article Review of Scientific Instruments* [81, 121101 \(2011\)](#)
- *Evolution of Microscopic Localization in Graphene in a Magnetic Field: From Scattering Resonances to Quantum Dots*, Suyong Jung, Gregory M. Rutter, Nikolai N. Klimov, David B. Newell, Irene Calizo, Angela R. Hight-Walker, Nikolai B. Zhitenev, and Joseph A. Stroscio, *Nature Physics* [7, 245 \(2011\)](#)
 - *Microscopic polarization in the bilayer graphene*, J. A. Stroscio, S. Jung, N. Klimov, D. B. Newell, N. Zhitenev, and G. M. Rutter, *Nature Physics*, [7, 649 \(2011\)](#)
 - *Electromechanical Properties of Graphene Drumheads*, N. N. Klimov, S. Jung, S. Zhu, T. Li, C. A. Wright, S. D. Solares, D. B. Newell, N. B. Zhitenev, and J. A. Stroscio, *Science* [336, 1557 \(2012\)](#)
 - *Renormalization of the Graphene Dispersion Velocity Determined from Scanning Tunneling Spectroscopy*, J. S. Chae, S. Y. Jung, A. F. Young, C. Dean, L. Wang, Y. Gao, K. Watanabe, T. Taniguchi, J. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, *Physical Review Letters* [109, 116802 \(2012\)](#)
 - *Electric field tuning of the surface band structure of topological insulator Sb_2Te_3 thin films*, T. Zhang, J. Ha, N. Levy, Y. Kuk, and J. A. Stroscio, *Physical Review Letters* [111, 056803 \(2013\)](#)
 - *Experimental evidence for s-wave pairing symmetry in superconducting $Cu_xBi_2Se_3$ single crystals using a scanning tunneling microscope*, N. Levy, T. Zhang, J. Ha, F. Sharifi, A. A. Talin, Y. Kuk, and J. A. Stroscio, *Physical Review Letters* [110, 117001 \(2013\)](#)
 - *Autonomous Assembly of Atomically Perfect Nanostructures Using a Scanning Tunneling Microscope*, Robert J. Celotta, Stephen B. Balakirsky, Aaron P. Fein, Frank M. Hess, Gregory M. Rutter, and Joseph A. Stroscio, *Invited Article Review Article of Review of Scientific Instruments* [85, 121301 \(2014\)](#)
 - *Creating and probing electron whispering-gallery modes in graphene*, Y. Zhao, J. Wyrick, F. D. Natterer, J. F. Rodriguez-Nieva, C. Lewandowski, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Stroscio, *Science* [348, 672 \(2015\)](#)
 - *Strong asymmetric charge carrier dependence in inelastic electron tunneling spectroscopy of graphene phonons*, F. D. Natterer, Y. Zhao, J. Wyrick, Y.-H. Chan, W.-Y. Ruan, M.-Y. Chou, K. Watanabe, T. Taniguchi, N. B. Zhitenev, and J. A. Stroscio, *Physical Review Letters* [114, 245502 \(2015\)](#)
 - *An on/off berry phase switch in circular graphene resonators*, F. Ghahari, D. Walkup, C. Gutierrez, J. F. Rodriguez-Nieva, Y. Zhao, J. Wyrick, F. D. Natterer, W. G. Cullen, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Stroscio, *Science* [356, 845 \(2017\)](#)
 - *Interaction-driven quantum Hall wedding cake-like structures in graphene quantum dots*, C. Gutierrez, D. Walkup, F. Ghahari, C. Lewandowski, J. F. Rodriguez-Nieva, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Stroscio, *Science* [361, 789 \(2018\)](#)
 - *Achieving μeV Tunneling Resolution in an In-Operando Scanning Tunneling Microscopy, Atomic Force Microscopy, and Magnetotransport System for Quantum Materials Research* (Invited Article), Johannes Schwenk, Sungmin Kim¹, Julian Berwanger, Fereshte Ghahari, Daniel Walkup, Marlou R. Slot, Son T. Le¹, William G. Cullen, Steven R. Blankenship, Sasa Vranjkovic, Hans J. Hug, Young Kuk, Franz

- J. Giessibl, and Joseph A. Stroscio, [*Rev. of Sci. Instr.* **91**, 071101 \(2020\)](#).
- *Edge Channels of Broken-Symmetry Quantum Hall States in Graphene probed by Atomic Force Microscopy*, Sungmin Kim, Johannes Schwenk, Daniel Walkup, Yihang Zeng, Fereshte Ghahari, Son T. Le1, Marlou R. Slot, Julian Berwanger, Steven R. Blankenship, Kenji Watanabe, Takashi Taniguchi, Franz J. Giessibl, Nikolai B. Zhitenev, Cory R. Dean, and Joseph A. Stroscio, [*Nature Communications* **12**, 2852 \(2021\)](#).

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117. Edge Channels of Broken-Symmetry Quantum Hall States in Graphene probed by Atomic Force Microscopy, Sungmin Kim, Johannes Schwenk, Daniel Walkup, Yihang Zeng, Fereshte Ghahari, Son T. Le1, Marlou R. Slot, Julian Berwanger, Steven R. Blankenship, Kenji Watanabe, Takashi Taniguchi, Franz J. Giessibl, Nikolai B. Zhitenev, Cory R. Dean, and Joseph A. Stroscio, *Nature Communications* **12**, 2852 (2021).
116. Achieving μeV Tunneling Resolution in an In-Operando Scanning Tunneling Microscopy, Atomic Force Microscopy, and Magnetotransport System for Quantum Materials Research (Invited Article), Johannes Schwenk, Sungmin Kim1, Julian Berwanger, Fereshte Ghahari, Daniel Walkup, Marlou R. Slot, Son T. Le1, William G. Cullen, Steven R. Blankenship, Sasa Vranjkovic, Hans J. Hug, Young Kuk, Franz J. Giessibl, and Joseph A. Stroscio, *Rev. of Sci. Instr.* **91**, 071101 (2020).
115. Tuning single-electron charging and interactions between compressible Landau level islands in graphene (Editor's Suggestion), Daniel Walkup, Fereshte Ghahari, Christopher Gutiérrez, Kenji Watanabe, Takashi Taniguchi, Nikolai B. Zhitenev, and Joseph A. Stroscio, *Physical Review B* **101**, 035428 (2020).
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113. Helical level structure of Dirac potential wells, D. Walkup and J. A. Stroscio, *Physical Review B* **96**, 201409(R) (2017).
112. An on/off berry phase switch in circular graphene resonators, F. Ghahari, D. Walkup, C. Gutierrez, J. F. Rodriguez-Nieva, Y. Zhao, J. Wyrick, F. D. Natterer, W. G. Cullen, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Stroscio, *Science* **356**, 845 (2017).
111. Tomography of a probe potential using atomic sensors on graphene, J. Wyrick, F. D. Natterer, Y. Zhao, K. Watanabe, T. Taniguchi, W. G. Cullen, N. B. Zhitenev, and J. A. Stroscio, *ACS Nano* **10**, 10698–10705 (2016).
110. Energy bandgap and edge states in an epitaxially grown graphene/h-BN heterostructure, Hwang B., Hwang J., Yoon J. K., Lim S., Kim S., Lee M., Kwon J. H., Baek H., Sung D., Kim G., Hong S., Ihm J., Stroscio J. A., and Kuk Y., *Scientific Reports* **6**, 31160 (2016).
109. Scanning tunneling spectroscopy of proximity superconductivity in epitaxial multilayer graphene, F. D. Natterer, J. Ha, H. Baek, D. Zhang, W. G. Cullen, N. B. Zhitenev, Y. Kuk, and J. A. Stroscio, *Physical Review B* **93**, 045406 (2016).
108. Programmable extreme pseudomagnetic fields in graphene by a uniaxial stretch, S. Zhu, J. A. Stroscio, and T. Li, *Physical Review Letters* **115**, 245501 (2015).
107. Creating nanostructured superconductors on demand by local current annealing, H. Baek, J. Ha, D. Zhang, B. Natarajan, J. P. Winterstein, R. Sharma, R. Hu, K. Wang, S. Ziemak, J. Paglione, Y. Kuk, N. B. Zhitenev, and J. A. Stroscio, *Physical Review B* **92**, 094510 (2015).

106. Strong asymmetric charge carrier dependence in inelastic electron tunneling spectroscopy of graphene phonons, F. D. Natterer, Y. Zhao, J. Wyrick, Y.-H. Chan, W.-Y. Ruan, M.-Y. Chou, K. Watanabe, T. Taniguchi, N. B. Zhitenev, and J. A. Stroscio, *Physical Review Letters* **114**, 245502 (2015).
105. Creating and probing electron whispering-gallery modes in graphene, Y. Zhao, J. Wyrick, F. D. Natterer, J. F. Rodriguez-Nieva, C. Lewandowski, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Stroscio, *Science* **348**, 672–675 (2015)
104. Autonomous Assembly of Atomically Perfect Nanostructures Using a Scanning Tunneling Microscope, Robert J. Celotta, Stephen B. Balakirsky, Aaron P. Fein, Frank M. Hess, Gregory M. Rutter, and Joseph A. Stroscio, *Invited Article Review Article of Review of Scientific Instruments* **85**, 121301 (2014).
- 103 Pseudomagnetic fields in a locally strained graphene drumhead, S. Zhu, Y. Huang, N. N. Klimov, D. B. Newell, N. B. Zhitenev, J. A. Stroscio, S. D. Solares, and T. Li, *Physical Review B* **90**, 075426 (2014).
101. Quasiparticle scattering from topological crystalline insulator SnTe (001) surface states Duming Zhang, Hongwoo Baek, Jeonghoon Ha, Tong Zhang, Jonathan E. Wyrick, Albert V. Davydov, Young Kuk, and Joseph A. Stroscio, *Physical Review B* **89**, 245445 (2014).
100. Thermoelectric imaging of structural disorder in epitaxial graphene, S. Cho, S. D. Kang, W. Kim, E.-S. Lee, S.-J. Woo, K.-J. Kong, I. Kim, H.-D. Kim, T. Zhang, J. A. Stroscio, Y.-H. Kim, and H.-K. Lyee, *Nature Materials* **12**, 913-918, (2013).
99. Electric field tuning of the surface band structure of topological insulator Sb₂Te₃ thin films, T. Zhang, J. Ha, N. Levy, Y. Kuk, and J. A. Stroscio, *Physical Review Letters* **111**, 056803 (2013)
98. Experimental evidence for s-wave pairing symmetry in superconducting Cu_xBi₂Se₃ single crystals using a scanning tunneling microscope, N. Levy, T. Zhang, J. Ha, F. Sharifi, A. A. Talin, Y. Kuk, and J. A. Stroscio, *Physical Review Letters* **110**, 117001 (2013).
97. Scanning tunneling microscopy of gate tunable topological insulator Bi₂Se₃ thin films, T. Zhang, N. Levy, J. Ha, Y. Kuk, and J. A. Stroscio, *Physical Review B* **87**, 115410 (2013).
96. Renormalization of the Graphene Dispersion Velocity Determined from Scanning Tunneling Spectroscopy, J. S. Chae, S. Y. Jung, A. F. Young, C. Dean, L. Wang, Y. Gao, K. Watanabe, T. Taniguchi, J. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, *Physical Review Letters* **109**, 116802 (2012).
95. Electromechanical Properties of Graphene Drumheads, N. N. Klimov, S. Jung, S. Zhu, T. Li, C. A. Wright, S. D. Solares, D. B. Newell, N. B. Zhitenev, and J. A. Stroscio, *Science* **336**, 1557–1561 (2012).
94. Enhanced Carrier Transport along Edges of Graphene Devices, Jungseok Chae, Suyong Jung, Sungjong Woo, Hongwoo Baek, Jeonghoon Ha, Young Jae Song, Young-Woo Son, Nikolai B. Zhitenev, Joseph A. Stroscio, and Young Kuk, *Nano Letters* **12**, 1839 (2012).
93. Charge Puddles and Edge Effect in a Graphene Device as Studied by a Scanning Gate Microscope, J. Chae, H. J. Yang, H. Baek, J. Ha, Y. Kuk, S. Y. Jung, Y. J. Song, N. B. Zhitenev, J. A. Stroscio, S. J. Woo and Y.-W. Son, *International Journal of High Speed Electronics and Systems* **20**, 205-216 (2011).

92. Mechanism for Puddle Formation in Graphene, Shaffique Adam, Suyong Jung, Nikolai N. Klimov, Nikolai B. Zhitenev, Joseph A. Stroscio, and M. D. Stiles, *Physical Review B* **84**, 235421 (2011). .
91. Graphene: Materials to Devices, J. Chae, J. Ha, H. Baek, Y. Kuk, S. Jung, Y. Song, N. Zhitenev, J. Stroscio, S. Woo, and Y. Son, *Microelectronic Engineering* **88**, 1211-1213 (2011).
90. Grain Boundary Loops in Graphene, E. Cockayne, G. M. Rutter, N. P. Guisinger, J. N. Crain, J. A. Stroscio, and P. N. First, *Physical Review B*, **83**, 195425 (2011).
89. Microscopic polarization in the bilayer graphene, J. A. Stroscio, S. Jung, N. Klimov, D. B. Newell, N. Zhitenev, and G. M. Rutter, *Nature Physics*, **7**, 649 (2011).
88. Landau levels and band bending in few-layer epitaxial graphene, H. Min, S. Adam, Y. J. Song, J. A. Stroscio, M. D. Stiles, and A. H. MacDonald, *Physical Review B* **83**, 155430 (2011).
87. Evolution of Microscopic Localization in Graphene in a Magnetic Field: From Scattering Resonances to Quantum Dots, Suyong Jung, Gregory M. Rutter, Nikolai N. Klimov, David B. Newell, Irene Calizo, Angela R. Hight-Walker, Nikolai B. Zhitenev, and Joseph A. Stroscio, *Nature Physics* **7**, 245-251 (2011).
86. A 10 mK scanning probe microscopy facility, Y. J. Song, A. F. Otte, V. Shvarts, Z. Zhao, Y. Kuk, S. R. Blankenship, A. Band, F. M. Hess, and J. A. Stroscio, *Invited Article Review of Scientific Instruments* **81**, 121101 (2011).
85. High Resolution Tunneling Spectroscopy of a Graphene Quartet, Young Jae Song, Alexander F. Otte, Young Kuk, Yike Hu, David B. Torrance, Phillip N. First, Walt A. de Heer, Hongki Min, Shaffique Adam, Mark D. Stiles, Allan H. MacDonald, and Joseph A. Stroscio, *Nature* **467**, 185-189 (2010).
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Presentations

345. Edge Channels of Broken Symmetry Quantum Hall States in Graphene Probed by Atomic Force Microscopy, S. Kim, J. Schwenk, D. Walkup, Y. Zeng, F. Ghahari, S. T. Le, M. R. Slot, J. Berwanger, S. R. Blankenship, K. Watanabe, T. Taniguchi, F. J. Giessibl, N. B. Zhitenev, C. R. Dean, and J. A. Stroscio, International Conference of Nanoscience and Technology (ICN+T 2021), Virtual, July 13, 2021.
344. A Microscopic View of Graphene Quantum Hall Edge States with STM and AFM Measurements (invited), J. A. Stroscio, MIT, Department of Physics, Chez Pierre Seminar, Virtual, May 3, 2021.
343. A Microscopic View of Graphene Quantum Hall Edge States with STM and AFM Measurements (invited), J. A. Stroscio, Atomic-Scale Quantum Materials Colloquium Series, Virtual, April 12, 2021.
342. Combining STM, AFM, and Magnetotransport Measurements for In-Operando Studies of Quantum Materials (invited), J. A. Stroscio, George Mason University, Department of Physics and Astronomy Colloquium, Virtual, April 2, 2021.
341. Combining Scanning Tunneling Microscopy, Atomic Force Microscopy, and Magnetotransport Measurements for in-Operando Studies of Quantum Materials (invited), J. A. Stroscio, APS March Meeting 2021, Virtual, March 15, 2021.
340. Edge Channels of Broken Symmetry Quantum Hall States in Graphene probed by Atomic Force Microscopy, S. Kim, J. Schwenk, D. Walkup, Y. Zeng, F. Ghahari, S. T. Le, M. R. Slot, J. Berwanger, S. R. Blankenship, K. Watanabe, T. Taniguchi, F. J. Giessibl, N. B. Zhitenev, C. R. Dean, and J. A. Stroscio, APS March Meeting 2021, Virtual, March 18, 2021.
339. STM-Based Fabrication and Characterization of Coupled Graphene Quantum Dots, D. Walkup, F. Ghahari, K. Watanabe, T. Taniguchi, N. B. Zhitenev, and J. A. Stroscio, 28th International Colloquium on Scanning Probe Microscopy (ICSPM28), Virtual, December 11, 2020.
338. Atomic Force and Kelvin Force Probe Microscopy Study on the Zeroth Landau Level of the Graphene Quantum Hall System, S. Kim, J. Schwenk, D. Walkup, Y. Zeng, F. Ghahari, S. T. Le, M. R. Slot, J. Berwanger, S. R. Blankenship, K. Watanabe, T. Taniguchi, F. J. Giessibl, N. B. Zhitenev, C. R. Dean, and J. A. Stroscio, 28th International Colloquium on Scanning Probe Microscopy (ICSPM28), Virtual, December 11, 2020.
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336. Visualizing the Interplay between Spatial and Magnetic Confinement in Graphene Quantum Dots, (invited) Joseph A. Stroscio, AVS 66th International Symposium & Exhibition, Columbus, OH, October 20, 2019.
335. Confining and Probing those Slippery Carriers in Graphene with Electric and Magnetic Fields (invited), J. A. Stroscio, 683 Division Presentation, NIST, Gaithersburg, MD, September 17, 2019.

334. Visualizing the interplay between spatial and magnetic confinement in graphene quantum dots (invited), J. A. Stroscio, 8th International Conference on Scanning Probe Spectroscopy and Related Techniques SPS'19, Hamburg University, Hamburg, Germany, June 18, 2019.
333. Visualizing the Interplay between Spatial and Magnetic Confinement in Graphene Quantum Dots via Tunneling Spectroscopy (invited), J. A. Stroscio, Columbia University, Physics Department Colloquium, New York, NY, April 12, 2019.
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325. Wedding Cakes from Electron Interactions and Confinement in Graphene Quantum Dots (invited), J. A. Stroscio, Spins on Surfaces (SoS2) Workshop, San Sebastian, Spain, September 11, 2018.
324. Visualizing the interplay between spatial and magnetic confinement in graphene quantum dots, (invited), J. A. Stroscio, Center for Quantum Nanoscience, Ewha University, Seoul, Korea, August 21, 2018.
323. Development of in-Operando Combined Transport, STM, and AFM Measurement Capability with Application to the Graphene 2D System (invited), J. A. Stroscio, "Advanced Scanning Probe Microscopy" (ASPM), Busan, Korea, August 14, 2018.
322. Confinement, Interactions, and Charging of Graphene Quantum Dots (invited), J. A. Stroscio, Nijmegen University, Nijmegen, Netherlands, July 29, 2018.

321. Observation of Quantum-Hall Wedding Cakes in Graphene Quantum dots, D. Walkup, C. Gutierrez, F. Ghahari, C. Lewandowski, J. Rodriguez-Nieva, T. Taniguchi, K. Watanabe, L. Levitov, N. Zhitenev, and J. A. Stroscio, SPSTM-7 & LTSPM-1 International Conference 2018, Nijmegen, Netherlands, July 28, 2018.
320. STM Characterization of 2D Material-based Devices (invited), N. Zhitenev, W. Cullen and J. A. Stroscio, 2D Materials beyond graphene: Government Workshop, Naval Research Lab, Washington, D. C., July 23, 2018.
319. Imaging the Coulomb Blockade in Graphene Landau-level Quantum Dots, D. Walkup, F. Ghahari, C. Gutierrez, C. Lewandowski, J. Rodriguez-Nieva, K. Watanabe, T. Taniguchi, N. Zhitenev, and J. A. Stroscio, International Conference on Nanoscience + Technology 2018, Brno, Czech Republic, July 22, 2018.
318. In-Operando AFM/STM and Transport Measurements of 2D Electronic Devices at 10mK Temperature, J. Schwenk, S. Kim, F. Ghahari, J. Berwanger, W. G. Cullen, S. R. Blankenship, Y. Kuk, F. J. Giessibl, N. B. Zhitenev, and J. A. Stroscio, International Conference on Nanoscience + Technology (ICN+T) 2018, Brno, Czech Republic, July 22, 2018.
317. Quantized States, Berry Phases, and Coulomb Charging in Graphene Super Atoms, J. A. Stroscio, Novel 2D materials explored via scanning probe microscopy & spectroscopy (2DSPM), San Sebastian, Spain, June 25, 2018.
316. Exploring Graphene Quantum Dots Inside Out (invited), J. A. Stroscio, Frontiers in Quantum Materials and Devices, Cambridge, MA, June 4, 2018.
315. Quantized States, Berry Phases, and Wedding Cakes in Graphene Quantum Dots (invited), J. A. Stroscio, Physics Department Colloquium, Rutgers University, New Brunswick, NJ, April 17, 2018.
314. Developing in Operando STM, AFM, and Transport Measurement Capability, S. Kim, J. Schwenk, F. Ghahari, J. Berwanger, W. G. Cullen, S. R. Blankenship, F. J. Giessibl, Y. Kuk, and J. A. Stroscio, NIST-nCORE Engagement Workshop, NIST, Gaithersburg, MD, April 9, 2018.
313. Confinement, Berry Phase, and Coulomb Charging in Graphene Quantum Dots (invited), D. Walkup, J. A. Stroscio, F. Ghahari, C. Gutierrez, C. Lewandowski, J. R. Nieva, K. Watanabe, T. Taniguchi, L. S. Levitov, and N. B. Zhitenev, APS March Meeting 2018, Los Angeles, CA, March 5, 2018.
312. Development of Scanning Probe Instruments and Application to Electronic Structure of 2D Materials (invited), J. A. Stroscio, APS March Meeting 2018, Los Angeles, CA, March 5, 2018.
311. A Combined Atomic Force- and Tunneling Microscopy System at 10mK Temperature, J. Schwenk, S. Kim, J. Berwanger, W. G. Cullen, S. R. Blankenship, Y. Kuk, F. J. Giessibl, and J. A. Stroscio, APS March Meeting 2018, Los Angeles, CA, March 5, 2018.
310. Visualizing the Coulomb Blockade in Graphene Quantum Dots, Part I, F. Ghahari, D. Walkup, C. Gutierrez, K. Watanabe, T. Taniguchi, N. B. Zhitenev, and J. A. Stroscio, APS March Meeting 2018, Los Angeles, CA, March 5, 2018.
309. Visualizing the Coulomb Blockade in Graphene Quantum Dots; Part II, D. Walkup, F. Ghahari, C. Gutierrez, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Stroscio, APS March Meeting 2018, Los Angeles, CA, March 4, 2018.

308. Determination of Validity of Alternative Electrodynamic Theory of Superconductivity by Using Ultra Low Temperature Scanning Probe Microscopy, S. Kim, J. Schwenk, J. Berwanger, S. R. Blankenship, W. G. Cullen, Y. Kuk, F. Giessible, and J. A. Stroscio, APS March Meeting 2018, Los Angeles, CA, March 4, 2018.
307. Quantized States, Berry Phases, and Coulomb Charging in Graphene Super Atoms (invited), J. A. Stroscio, US-Czech Conference on Advanced Nanotechnology and Chemistry, Prague, Czech Republic, January 17, 2018.
306. A Berry Phase Switch in Graphene Artificial Atoms (invited), J. A. Stroscio, University of Texas-Austin Physics Colloquium, Austin, TX, November 29, 2017.
305. Characterization, Metrology, and Synthesis of 2D Materials at NIST, J. A. Stroscio, A. V. Davydov, D. B. Newell, C. A. Richter, A. R. Hight-Walker, and N. B. Zhitenev, Nanoelectronics Characterization/Metrology Advances and Breakthroughs A Special Symposium – NIST/Intel, NIST, Gaithersburg, MD, November 17, 2017.
304. A Quantum Berry Phase Switch in Circular Graphene Resonators, D. Walkup, F. Ghahari Kermani, C. Gutierrez, J. Rodriguez-Nieva, Y. Zhao, J. Wyrick, F. Natterer, W. Cullen, K. Watanabe, T. Taniguchi, L. Levitov, Z. Zhitenev, and J. A. Stroscio, AVS 64th International Symposium & Exhibition, Tampa, FL, October 29, 2017.
303. Transition from Spatial to Magnetic Confinement in Graphene Quantum Dots, F. Ghahari Kermani, D. Walkup, C. Gutierrez, J. Rodriguez-Nieva, K. Watanabe, T. Taniguchi, L. Levitov, N. Zhitenev, and J. A. Stroscio, AVS 64th International Symposium & Exhibition, Tampa, FL, October 29, 2017.
302. Quantized States, Berry Phases, and Coulomb Charging in Graphene Super Atoms (invited), J. A. Stroscio, The 8th International Symposium on Surface Science, Tsukuba, Japan, October 26, 2017.
301. Screw-Dislocated Level Structure of Graphene Potential Wells, Walkup D., Stroscio J. A., APS March Meeting 2017, New Orleans, LA, New Orleans, LA, March 13, 2017.
300. Geometric Interference Observed in a High-Mobility Graphene Ring, Richter C. A., Le S. T., Hagmann J., Gutierrez C., Cheng G., Hight Walker A. R., Klimov N., Stroscio J. A., and Newell D. B., APS March Meeting 2017, New Orleans, LA, New Orleans, LA, March 12, 2017.
299. Whispering Galleries and Berry Phase Switches in Circular Graphene Resonators (invited), Stroscio J. A., Pittsburgh Quantum Institute, University of Pittsburgh, Pittsburgh, PA, Pittsburgh, PA, January 12, 2017..
298. Creating and Probing Graphene Electron Optics with Local Probes (invited), Stroscio J. A., 20th International Vacuum Congress (IVC-20) plus ICN+T2016, Busan, South Korea, Busan, South Korea, August 22, 2016.
297. Whispering Galleries and Berry Phase Switches in Circular Graphene Resonators (invited), Stroscio J. A., Center for Integrated Nanostructure Physics, Sungkyunkwan University, Suwon, Korea, Suwon, Korea, August 18, 2016.
296. Whispering Galleries and Berry Phase Switches in Circular Graphene Resonators (invited), Stroscio J. A., Samsung Advance Institute of Technology, Suwon, Korea, Suwon, Korea, August 18, 2016.
295. Designing the Next Generation of Scanning Probe Instruments for the CNST NanoLab (invited), Stroscio J. A., CNST National Academies Panel On Assessment, NIST, Gaithersburg, MD, NIST, Gaithersburg, MD, May 3, 2016.

294. Experimental Evidence of Giant Non-reciprocity of WGM Modes in Graphene, Zhao Y., Wyrick J., Natterer F., Rodriguez J. F., Levitov L. S., Watanabe K., Taniguchi T., Zhitenev N. B., and Strosio J. A., APS March Meeting 2016, Baltimore, MD, Baltimore, MD, March 15, 2016.
293. Tunneling Spectroscopy of Graphene pn Junctions and Superconductor-Graphene Boundaries (invited), Strosio J. A., APS March Meeting 2016, Baltimore, MD, Baltimore, MD, March 14, 2016.
292. Proximity Induced Superconductivity in Epitaxial Graphene, Natterer F., Ha J., Baek H., Zhang D., Cullen W., Zhitenev N. B., Kuk Y., and Strosio J. A., APS March Meeting 2016, Baltimore, MD, Baltimore, MD, March 14, 2016.
291. Creating Nanostructured Superconductors on Demand by Local Current Annealing, Baek H., Ha J., Zhang D., Natarajan B., Winterstein J. P., Sharma, R., Hu R., Wang K., Ziemak S., Paglione J., Kuk Y., Zhitenev N. B., and Strosio J. A., APS March Meeting 2016, Baltimore, MD, Baltimore, MD, March 14, 2016.
290. Creating Nanostructured Superconductors on Demand by Local Current Annealing, Ha J., Khalsa G., Natterer F., Baek H., Cullen W. G., Kuk Y., and Strosio J. A., APS March Meeting 2016, Baltimore, MD, Baltimore, MD, March 14, 2016.
289. Modified Screening on Graphene by Adatoms, Wyrick J. E., Natterer F. D., Zhao Y., Watanabe K., Taniguchi T., Zhitenev N. B., and Strosio J. A., APS March Meeting 2016, Baltimore, MD, Baltimore, MD, March 14, 2016.
288. Chiral Enhanced Phonon Spectroscopy of Graphene, Natterer F. D., Zhao Y., Wyrick J., Ruan W. Y., Chan Y., Chou M.-Y., Zhitenev N. B., and Strosio J. A., AVS 62nd International Symposium & Exhibition, San Jose, CA, San Jose, CA, October 18, 2015.
287. Electron Whispering Gallery Modes in Graphene (invited), N. B. Zhitenev, Y. Zhao, J. Wyrick, F. D. Natterer, J. R. Rodriguez-Nieva, C. Lewandowski, K. Watanabe, T. Taniguchi, L. S. Levitov, N. B. Zhitenev, and J. A. Strosio, Crystal & Graphene Science Symposium - 2015, Cambridge, MA, September 21, 2015.
286. Chiral Enhanced Phonon Spectroscopy of Graphene, F. D. Natterer, Y. Zhao, J. Wyrick, W. Y. Ruan, Y. Chan, M.-Y. Chou, N. B. Zhitenev, and J. A. Strosio, March Meeting of the German Physical Society, Berlin, Germany, March 15, 2015.
285. Chiral Enhanced Phonon Excitations in Inelastic Electron Tunneling Spectroscopy of Graphene, F. D. Natterer, Y. Zhao, J. Wyrick, W. Y. Ruan, Y. Chan, M.-Y. Chou, N. B. Zhitenev, and J. A. Strosio, APS March Meeting 2015, San Antonio, TX, March 2, 2015.
284. Resonant Modes in Circular Graphene pn Junctions Created by STM Probes, J. E. Wyrick, Y. Zhao, F. D. Natterer, J. R. Nieva, C. Lewandowski, L. Levitov, N. B. Zhitenev, and J. A. Strosio, APS March Meeting 2015, San Antonio, TX, March 2, 2015.
283. Scanning Tunneling Microscopy Study of a New Charge Density Wave Phase in VSe₂ Thin Films, D. Zhang, J. Ha, H. Baek, F. D. Natterer, Y. Kuk, N. B. Zhitenev, and J. A. Strosio, APS March Meeting 2015, San Antonio, TX, March 2, 2015.
282. Tip-Induced Potential Confinement on Graphene in Scanning Tunneling Microscopy Measurement, Y. Zhao, J. Chae, J. Wyrick, F. D. Natterer, S. Jung, A. F. Young, C. R. Dean, L. Wang, Y. Gao, J. N. Rodrigues, K. Watanabe, T. Taniguchi, A. Shaffique, J. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Strosio, AVS 61st International Symposium & Exhibition, Baltimore, MD, November 13, 2014.

281. Local Probing of Superconductivity in the Half Heusler Compound, H. Baek, J. Ha, J. Paglione, Y. Nakajima, P. S. Syers, X. Wang, K. Wang, Y. Kuk, and J. A. Stroscio, AVS 61st International Symposium & Exhibition, Baltimore, MD, November 10, 2014.
280. Probing the Electronic Structure of the Layered Electride Ca_2N , J. Ha, H. Baek, D. Zhang, Y. Kim, S.-W. Kim, Y. J. Song, Y. Kuk, and J. A. Stroscio, AVS 61st International Symposium & Exhibition, Baltimore, MD, November 10, 2014.
279. Rotational Excitation Spectroscopy with the STM and Field Effect Control of Molecular Dynamics, F. D. Natterer, F. Patthey, Y. Zhao, J. Wyrick, J. A. Stroscio, and H. Brune, AVS 61st International Symposium & Exhibition, Baltimore, MD, November 10, 2014.
278. Probing Topological Crystalline Insulator SnTe (001) Surface States Via Energy Resolved Quasiparticle Interference, D. Zhang, H. Baek, J. Ha, T. Zhang, J. E. Wyrick, A. V. Davydov, Y. Kuk, and J. A. Stroscio, AVS 61st International Symposium & Exhibition, Baltimore, MD, November 9, 2014.
277. Atomic Scale Measurements of 2D Material Systems – Graphene and Beyond (invited), J. A. Stroscio, CNST Project Leader Seminar Series, NIST, Gaithersburg, MD, October 15, 2014
276. Gating Tunneling Spectroscopy of Graphene and Topological Insulator Surface States (invited), J. A. Stroscio, International Conference on Nanoscience + Technology 2014 (ICN+T 2014), Vail, CO, July 21, 2014.
275. Local Electronic Structure of the 2-Dimensional Electride Ca_2N , J. Ha, H. Baek, D. Zhang, Y. Kim, S.-W. Kim, Y. J. Song, Y. Kuk, and J. A. Stroscio, International Conference on Nanoscience + Technology 2014 (ICN+T 2014), Vail, CO, July 21, 2014.
274. Local Probing of Superconductivity in the Half Heusler Compound YPdBi , H. W. Baek, J. Ha, J. Paglione, Y. Kuk, J. A. Stroscio, Y. Nakajima, P. S. Syers, X. Wang, and K. Wang, International Conference on Nanoscience + Technology 2014 (ICN+T 2014), Vail, CO, July 21, 2014.
273. Quasiparticle Scattering from Topological Crystalline Insulator SnTe (001) Surface States, D. Zhang, H. Baek, J. Ha, T. Zhang, A. V. Davydov, Y. Kuk, and J. A. Stroscio, International Conference on Nanoscience + Technology 2014 (ICN+T 2014), Vail, CO, July 21, 2014.
272. Rotational Excitation Spectroscopy and Field Effect Control of Molecular Dynamics, F. D. Natterer, F. Patthey, Y. Zhao, J. Wyrick, J. A. Stroscio, and H. Brune, International Conference on Nanoscience + Technology 2014 (ICN+T 2014), Vail, CO, July 20, 2014.
271. Tip-Induced Potential Confinement Effect on Graphene in Scanning Tunneling Microscopy Measurement, Y. Zhao, J. Chae, S. Jung, A. F. Young, C. R. Dean, L. Wang, Y. Gao, J. N. Rodrigues, K. Watanabe, T. Taniguchi, S. Adam, J. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, International Conference on Nanoscience + Technology 2014 (ICN+T 2014), Vail, CO, July 20, 2014.
270. Tunneling Spectroscopy Studies of Field Effect Gating of Graphene and Topological Insulator Surface States (invited), J. A. Stroscio, Flatlands Beyond Graphene 2014, Dublin, Ireland, July 10, 2014

269. Possible Superconductivity in the 2-Dimensional Electride Ca₂N, J. Ha, H. Baek, D. Zhang, F. Sharifi, Y. Kuk, Y. J. Song, Y. Kim, S. Kim, and J. A. Stroscio, APS March Meeting 2014, Denver, CO, March 3, 2014.
268. Tip-induced Coulomb gap in scanning tunneling microscopy experiment on graphene, Y. Zhao, J. Chae, S. Jung, A. F. Young, C. R. Dean, L. Wang, Y. Gao, J. N. Rodrigues, K. Watanabe, T. Taniguchi, A. Shaffique, J. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, APS March Meeting 2014, Denver, CO, March 3, 2014.
267. Local Probe Studies Graphene and Topological Material Surfaces (invited), J. A. Stroscio, Swiss Working Group of Surface and Interface Science, Institute of Physics, University of Fribourg, Fribourg, Switzerland, January 24, 2014.
266. Development of Scanning Tunneling Microscopy at NIST from 1987 to 2013 (invited), J. A. Stroscio, Heini Rohrer Memorial Symposium, Zurich, Switzerland, October 31, 2013.
265. Scanning Tunneling Microscopy of the Topological Crystalline Insulator SnTe, D. Zhang, J. Ha, H. Baek, Y. Kuk, and J. A. Stroscio, 60th Annual AVS International Symposium and Exhibition (AVS 2013), Long Beach, CA, October 29, 2013.
264. Local Probing of Topological Superconductivity in In-doped SnTe, H. Baek, J. Ha, N. Levy, T. Zhang, D. Zhang, F. Sharifi, Y. Kuk, S. Sasaki, Z. Ren, A. A. Taskin, K. Segawa, Y. Ando, L. Fu, and J. A. Stroscio, IVC-19 and ICN+T 2013 - International Conference on Nanoscience and Nanotechnology, Paris, France, September 9, 2013.
263. Scanning Tunneling Microscopy Observation of the Superconducting Pairing Symmetry in Cu_xBi₂Se₃, J. Ha, N. Levy, T. Zhang, F. Sharifi, A. A. Talin, Y. Kuk, and J. A. Stroscio, IVC-19 and ICN+T 2013 - International Conference on Nanoscience and Nanotechnology, Paris, France, September 9, 2013.
262. Local Probe Measurements of Graphene and Topological Insulators (invited), J. A. Stroscio, Physics and Nanoscience Distinguished Lecture, The Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, July 16, 2013.
261. Scanning Tunneling Microscopy of the Topological Crystalline Insulator SnTe., D. Zhang, J. Ha, H. Baek, T. Zhang, Y. Kuk, F. Sharifi, and J. A. Stroscio, AVS Mid-Atlantic Chapter DC Regional Meeting, NIST, Gaithersburg, MD, May 16, 2013.
260. Scanning Tunneling Spectroscopy of *in-situ* Gated Topological Insulators, J. Ha, T. Zhang, N. Levy, Y. Kuk, and J. A. Stroscio, AVS Mid-Atlantic Chapter DC Regional Meeting, NIST, Gaithersburg, MD, May 6, 2013.
259. Local Probe Measurements of Topological Insulators and Superconductors (invited), J. A. Stroscio, CNAM/CMTC Condensed Matter Colloquium, University of Maryland, College Park, MD, April 18, 2013.
258. Local Measurement on Graphene Electronics using Gate Mapping Tunneling Spectroscopy, J. Chae, Y. Zhao, S. Jung, A. F. Young, C. R. Dean, L. Wang, Y. Gao, K. Watanabe, T. Taniguchi, J. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, 2013 International Conference on Frontiers of Characterization and Metrology for Nanoelectronics, NIST, Gaithersburg, MD, March 25, 2013.
257. Local Tunneling Measurements of in-situ Gated Topological Insulators, J. Ha, N. Levy, T. Zhang, Y. Kuk, and J. A. Stroscio, 2013 International Conference on Frontiers of Characterization and Metrology for Nanoelectronics, NIST, Gaithersburg, MD, March 25, 2013.

256. Gate Map Tunneling Spectroscopy of Interactions in Graphene (invited), T. Zhang, N. Levy, J. H. Ha, Y. Kuk, and J. A. Stroscio, APS March Meeting 2013, Baltimore, MD, March 18, 2013.
255. Probing for Topological Superconductivity in In doped SnTe, J. Ha, N. Levy, T. Zhang, H. Baek, D. Zhang, F. Sharifi, Y. Kuk, S. Sasaki, Z. Ren, A. A. Taskin, K. Segawa, Y. Ando, L. Fu, and J. A. Stroscio, APS March Meeting 2013, Baltimore, MD, March 18, 2013.
254. Scanning Tunneling Microscopy Measurements of Superconductivity in $\text{Cu}_x\text{Bi}_2\text{Se}_3$, N. Levy, T. Zhang, J. Ha, F. Sharifi, A. A. Talin, Y. Kuk, and J. A. Stroscio, APS March Meeting 2013, Baltimore, MD, March 18, 2013.
253. Scanning Tunneling Microscopy Observation of the Superconducting Gap in $\text{Cu}_x\text{Bi}_2\text{Se}_3$, J. Ha, N. Levy, T. Zhang, R. Kallaher, F. Sharifi, A. Talin, Y. Kuk, and J. A. Stroscio, 2012 AVS 59th International Symposium and Exhibition, Tampa, FL, October 29, 2012.
252. Scanning Tunneling Spectroscopy of Topological Insulators' Electrically Tunable Electronic Structure, N. Levy, T. Zhang, J. Ha, Y. Kuk, and J. A. Stroscio, 2012 AVS 59th International Symposium and Exhibition, Tampa, FL, October 29, 2012.
251. Squeezing of the Graphene Dirac Cone Observed by Scanning Tunneling Spectroscopy, J. S. Chae, S. Jung, Y. Zhao, A. Young, C. Dean, L. Wang, J. Hone, K. Shepard, P. Kim, N. Zhitenev, and J. A. Stroscio, 2012 AVS 59th International Symposium and Exhibition, Tampa, FL, October 29, 2012.
250. Local Probe Measurements of Graphene and Topological Superconductors (invited), J. A. Stroscio, Physics Department Colloquium, Penn State University, State College, PA, October 18, 2012.
249. Exploring the Physics of Graphene with Local Probes (invited), J. A. Stroscio, Distinguished Lecture series, Oak Ridge National Lab, Oak Ridge, TN, September 27, 2012.
248. Electron-Electron Interactions and the Effect of Residual Disorder in Single Layer Graphene on Boron-Nitride Substrates, J. Chae, S. Jung, A. Young, C. Dean, L. Wang, J. C. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, The 2012 International Conference on Nanoscience + Technology (ICN+T), Paris, France, July 24, 2012.
247. Scanning Tunneling Spectroscopy of Topological Insulators' Electrically Tunable Electronic Structure, N. Levy, T. Zhang, J. H. Ha, Y. Kuk, and J. A. Stroscio, The 2012 International Conference on Nanoscience + Technology (ICN+T), Paris, France, July 24, 2012.
246. Exploring the Physics of Graphene with Local Probes (invited), J. A. Stroscio, German Physical Society, Berlin, Germany, March 28, 2012.
245. Atomic Scale Observation of Electron-Electron Interactions in Single-Layer Graphene Devices on Boron Nitride Dielectrics, S. Jung, J. Chae, A. F. Young, C. R. Dean, L. Wang, J. C. Hone, K. L. Shepard, P. Kim, N. B. Zhitenev, and J. A. Stroscio, APS March Meeting 2012, Boston, MA, February 27, 2012.
244. Scanning Tunneling Spectroscopy Measurements on Single Layer Graphene on Ultraclean Boron-Nitride Substrate in the Quantum Hall Regime, J. Chae, S. Jung, A. Young, C. Dean, L. Wang, P. Kim, N. B. Zhitenev, and J. A. Stroscio, APS March Meeting 2012, Boston, MA, February 27, 2012.

243. Examining Interactions and Disorder in Graphene Systems (invited), J. A. Stroscio, Kavli Institute Miniprogram 'The Physics of Graphene', Santa Barbara, CA, January 1, 2012.
242. Exploring the Physics of Graphene with Local Probes (invited), J. A. Stroscio, Physics Department Colloquium, University of Maryland, College Park, MD, December 6, 2011.
241. Atomic Scale Determination of the Bilayer Graphene Energy Gap, S. Jung, N. N. Klimov, D. B. Newell, N. B. Zhitenev, and J. A. Stroscio, AVS 58th International Symposium & Exhibition, Nashville, TN, November 30, 2011.
240. New UHV Low Temperature Scanning Probe Microscopy Facility for the Study of Future Electronic Materials (invited), J. A. Stroscio, 58th AVS International Symposium, Nashville, TN, November 1, 2011.
239. Probing Interactions in Single- and Few-layer Graphene with Tunneling Spectroscopy (invited), J. A. Stroscio, International Conference on Graphene Nanostructures, Regensburg, Germany, September 28, 2011.
238. A Microscopic View of Graphene (invited), J. A. Stroscio, 3rd International Symposium on the Science and Technology of Epitaxial Graphene, St. Augustine, FL, October 24, 2011.
237. Mechanism for Puddle Formation in Graphene (invited), S. Adam, C. Baldwin, S. Y. Jung, N. Klimov, N. B. Zhitenev, J. A. Stroscio, and M. D. Stiles, 3rd International Symposium on the Science and Technology of Epitaxial Graphene, St. Augustine, FL, October 24, 2011.
236. Scanning Tunneling Spectroscopy of Dirac Fermions at mK Temperatures (invited), J. A. Stroscio, 26th International Conference on Low Temperature Physics (LT26), Beijing, China, August 10, 2011.
235. High Resolution Tunneling Spectroscopy of Graphene in Strong and Weak Disorder Potentials (invited), J. A. Stroscio, Institut Néel – CNRS, Grenoble, France, May 26, 2011.
234. A Novel SPM System for Determining Quantum Electronic Structure at the Nanometer-scale (invited), J. A. Stroscio, 2011 International Conference on Frontiers of Characterization and Metrology for Nanoelectronics, MINATEC Campus, Grenoble, France, May 23, 2011.
233. Atomic Scale Characterization of Graphene Electronics (invited), J. A. Stroscio, NIST Workshop on Measurements to Enable Science and Engineering Beyond Moore's Law, Harbourtowne Gold Resort and Conference Center, St. Michaels, MD, April 6, 2011.
232. High Resolution Tunneling Spectroscopy in Strong and Weak Disorder Potentials (invited), J. A. Stroscio, APS March Meeting 2011, Dallas, TX, March 23, 2011.
231. MBE Growth of Topological Insulator Bi_2Se_3 and Bi_2Te_3 Films, T. Zhang, N. Levy, Y. J. Song, J. Chae, and J. A. Stroscio, APS March Meeting 2011, Dallas, TX, March 21, 2011.
230. Scanning Tunneling Microscopy of Dirac Fermions at mK Temperatures (invited), J. A. Stroscio, Forum on Industrial & Applied Physics, APS March Meeting 2011, Dallas, TX, March 21, 2011.
229. Scanning Tunneling Spectroscopy of Suspended Graphene in the Quantum Hall Regime, N. N. Klimov, S. Jung, G. M. Rutter, N. B. Zhitenev, D. B. Newell, and J. A. Stroscio, APS March Meeting 2011, Dallas, TX, March 21, 2011.

228. The Effect of the Tip in Scanning Tunneling Spectroscopy of Graphene Landau Levels, K. D. Kubista, D. L. Miller, M. Ruan, W. A. de Heer, P. N. First, G. M. Rutter, and J. A. Stroscio, APS March Meeting 2011, Dallas, TX, March 21, 2011.
227. Scanning Tunneling Spectroscopy Studies of a Gated Bilayer Graphene Device, S. Jung and N. Klimov, D. N. Newell, N. B. Zhitenev, and J. A. Stroscio, 18th Annual (2011) Sigma Xi Postdoctoral Poster Presentation, NIST, Gaithersburg, MD, February 16, 2011.
226. Ultra Low Temperature Scanning Tunneling Spectroscopy Study of the Local Electronic Structure of Two Dimensional Dirac Fermion Systems, N. Levy, T. Zhang, and J. Chae, J. A. Stroscio, 18th Annual (2011) Sigma Xi Postdoctoral Poster Presentation, NIST, Gaithersburg, MD, February 16, 2011.
225. Direct Measurement of the Energy Gaps Involved in the Lifting of the Valley and Spin Degeneracies in Epitaxial Graphene, Y. J. Song, A. F. Otte, D. B. Torrance, Y. Hu, P. N. First, W. A. deHeer, and J. A. Stroscio, AVS 57th International Symposium & Exhibition, Albuquerque, NM, October 18, 2010.
224. Scanning Tunneling Spectroscopy of a Gated Single-Layer Graphene Device in the Quantum Hall Regime, S. Jung, G. M. Rutter, N. N. Klimov, D. B. Newell, N. B. Zhitenev, and J. A. Stroscio, AVS 57th International Symposium & Exhibition, Albuquerque, NM, October 17, 2010.
223. Tunneling Spectroscopy of Graphene in Weak and Strong Disorder Potentials (invited), J. A. Stroscio, Graphene School, Institute for Scientific Studies of Cargèse, Corsica, France, October 11, 2010.
222. High Resolution Tunneling Spectroscopy of Graphene in Weak and Strong Disorder Potentials (invited), J. A. Stroscio, Y. J. Song, A. F. Otte, S. Jung, G. M. Rutter, D. B. Newell, N. N. Klimov, and N. B. Zhitenev, 18th International Vacuum Congress (IVC-18), Beijing, China, August 23, 2010.
221. Scanning tunneling microscopy of a gated graphene device in the quantum Hall regime, S. Jung, G. M. Rutter, N. N. Klimov, D. B. Newell, N. B. Zhitenev, and J. A. Stroscio, 18th International Vacuum Congress (IVC-18), Beijing, China, August 23, 2010.
220. Scanning Tunneling Spectroscopy of Gated Graphene Bilayers, G. M. Rutter, S. Jung, N. N. Klimov, D. B. Newell, N. B. Zhitenev, and J. A. Stroscio, 18th International Vacuum Congress (IVC-18), Beijing, China, August 23, 2010.
219. Local Conductance Variation in Graphene Devices: a Scanning Gate Microscope Study, J. S. Chae, S. Jung, S. J. Woo, H. W. Baek, J. H. Ha, Y. J. Song, Y. W. Son, N. B. Zhitenev, J. A. Stroscio, and Y. Kuk, 18th International Vacuum Congress (IVC-18), Beijing, China, August 23, 2010.
218. Scanning Tunneling Spectroscopy of Fractional Hall Physics in Epitaxial Graphene, Y. J. Song, A. F. Otte, Y. Kuk, P. N. First, W. A. de Heer, and J. A. Stroscio, International Conference on Nanoscience and Technology (ICN+T 2010), Beijing, China, August 23, 2010.
217. Scanning Tunneling Spectroscopy of Fractional Hall Physics in Epitaxial Graphene (invited), Y. J. Song, A. F. Otte, Y. Kuk, P. N. First, W. A. de Heer, and J. A. Stroscio, Spin-polarized STM Workshop, Seoul, Korea, August 19, 2010.
216. All Graphenes are Different! A Scanning Tunneling Spectroscopy Study (invited), J. A. Stroscio, Spin-polarized STM Workshop, Seoul, Korea, August 19, 2010.

215. High Resolution Tunneling Spectroscopy of Graphene in Strong and Weak Disorder Potentials (invited), J. A. Stroscio, Solid State Physics Seminar, University of California-Berkeley, Berkeley, CA, May 3, 2010.
214. High Resolution Tunneling Spectroscopy of Graphene in Strong and Weak Disorder Potentials (invited), J. A. Stroscio, Graphene Week Conference, University of Maryland, College Park, MD, April 23, 2010.
213. Local Conductance Variation in Graphene Devices: a Scanning Gate Microscope Study, J. Chae, S. Jung, S. Woo, H. Baek, J. Ha, Y. J. Song, Y. Son, N. B. Zhitenev, J. A. Stroscio, Y. Kuk, American Physical Society March Meeting, Portland, OR, March 15, 2010.
212. Magneto-transport Properties in Suspended Graphene Devices, S. Jung, N. Klimov, D. Newell, J. Stroscio, N. Zhitenev, American Physical Society March Meeting, Portland, OR, March 15, 2010.
211. Magnetic Quantization of Exfoliated Graphene Probed with Scanning Tunneling Spectroscopy, G. M. Rutter, S. Y. Jung, N. N. Klimov, N. B. Zhitenev, D. Newell, J. A. Stroscio, American Physical Society March Meeting, Portland, OR, March 15, 2010.
210. Connecting the Microscopic and Macroscopic Transport Properties of Graphene N. N. Klimov, S. Jung, G. M. Rutter, N. B. Zhitenev, D. B. Newell, J. A. Stroscio, American Physical Society March Meeting, Portland, OR, March 15, 2010.
209. The Effect of a Lattice Defect on Graphene Landau Levels: A Scanning Tunneling Spectroscopy Study, K. D. Kubista, D. L. Miller, M. RUAN, W. A. de Heer, P. N. First, G. M. Rutter, J. A. Stroscio, American Physical Society March Meeting, Portland, OR, March 15, 2010.
208. Real Space Imaging of the Quantum Hall Effect and Valley Polarization in Graphene, D. L. Miller, K. D. Kubista, M. RUAN, W. A. de Heer, P. N. First, G. M. Rutter, J. A. Stroscio, American Physical Society March Meeting, Portland, OR, March 15, 2010.
207. Mapping Magnetic Quantization in Real Space in Epitaxial Graphene (invited), J. A. Stroscio, Condensed Matter Seminar, University of Pennsylvania, Philadelphia, PA, January 27th, 2010.
206. Mapping the Quantum Hall Effect in Real Space in Epitaxial Graphene (invited), J. A. Stroscio, 37th Conference on the Physics and Chemistry of Surfaces and Interfaces, Santa Fe, NM, January 10, 2010.
205. Mapping Magnetic Quantization in Real Space in Epitaxial Graphene (invited), J. A. Stroscio, Physics Department Colloquium, Carnegie Mellon University, Pittsburg, PA, November 30, 2009.
204. Mapping Magnetic Quantization in Real Space in Epitaxial Graphene (invited), J. A. Stroscio, Condensed Matter Seminar, Princeton University, Princeton, NJ, November 23, 2009.
203. Observing the Quantization of Zero Mass Carriers in Epitaxial Graphene (invited), J. A. Stroscio, AVS 56th International Symposium & Exhibition, San Jose, CA, November 8, 2009.

202. Making Mn Substitutional Impurities in InAs using a Scanning Tunneling Microscope, Young Jae Song, Steve Erwin, Gregory Rutter, Phillip First, Nikolai Zhitenev, Young Kuk, Joseph A. Stroscio, AVS 56th International Symposium & Exhibition, San Jose, CA, November 8, 2009.
201. STM Measurements at mK Temperatures for Higher Energy Resolution, Young Jae Song, Alexander Otte, Young Kuk, and Joseph A. Stroscio, AVS 56th International Symposium & Exhibition, San Jose, CA, November 8, 2009.
200. Quantum Hall Effect in Suspended Graphene Devices, Suyong Jung, Nikolai N. Klimov, Joseph A. Stroscio, David B. Newell, and Nikolai B. Zhitenev, AVS 56th International Symposium & Exhibition, San Jose, CA, November 8, 2009.
199. Observing the Quantization of Zero Mass Carriers in Epitaxial Graphene (invited), J. A. Stroscio, Nanostructures at Surfaces, Ascona, Switzerland, September 20, 2009.
198. How Good is Epitaxial Graphene Grown on SiC?, G. M. Rutter and J. A. Stroscio, Graphene workshop at Army Research Lab, Adelphi, MD, August 13, 2009.
197. Scanning Tunneling Spectroscopies of Graphene, G. M. Rutter, D. Miller, K. Kubista, M. Ruan, W. A. de Heer, P. N. First, and J. A. Stroscio, Frontiers of Characterization and Metrology for Nanoelectronics, University at Albany, Albany, NY, May 15, 2009.
196. Observing the Quantization of Zero Mass Carriers in Graphene (invited), J. A. Stroscio, Department of Materials Science and Engineering Distinguished Lecturers Seminar, University of Maryland, College Park, MD, April 24th, 2009.
195. Landau Quantization of Zero Mass Carriers in Epitaxial Graphene (invited), J. A. Stroscio, First Epitaxial Graphene Workshop, Georgia Institute of Technology, Atlanta, GA, April 2, 2009.
194. Magnetic Oscillations and Intense Landau Quantization in De-coupled Epitaxial Graphene Multi-layers (invited), J. A. Stroscio, American Physical Society March Meeting, Pittsburgh, PA, March 16-20, 2009.
193. Magnetic Oscillations in Scanning Tunneling Spectroscopy Of Epitaxial Graphene on SiC, Kevin D. Kubista, David L. Miller, G. M. Rutter, M. Ruan, W. A. de Heer, P. N. First, J. A. Stroscio, American Physical Society March Meeting, Pittsburgh, PA, March 16-20, 2009.
192. Mapping quantized cyclotron orbits of Dirac particles in graphene, D. L. Miller, K. D. Kubista, G. M. Rutter, M. Ruan, W. A. de Heer, P. N. First, and J. A. Stroscio, American Physical Society March Meeting, Pittsburgh, PA, March 16-20, 2009.
191. Using Defects as Local Electronic Probes of Epitaxial Graphene on SiC, G. M. Rutter, K. Kubista, D. Miller, M. Ruan, W. A. de Heer, P. N. First, and J. A. Stroscio, 2009 American Physical Society March Meeting, Pittsburgh, PA, March 16-20, 2009.

190. Imaging local potential and conductance variation around a tip gate in a graphene device with electrostatic force and scanning gate microscopes, J. S. Chae, S. Jung, N. B. Zhitenev, J. A. Stroscio, Y. Kuk, American Physical Society March Meeting, Pittsburgh, PA, March 16-20, 2009.
189. Development of an Ultra Low Temperature Scanning Tunneling Microscope, Y. J. Song, A.F. Otte, Y. Kuk, and J. A. Stroscio, American Physical Society March Meeting, March 16-20, 2009, Pittsburgh, PA.
188. Magnetic Oscillations and Landau Quantization in Decoupled Epitaxial Graphene Multilayers (invited), J. A. Stroscio, 16th International Colloquium on SPM, Atagawa, Japan, December 11, 2008.
187. Electronic Properties of Epitaxial Graphene on SiC (invited), J. A. Stroscio, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, December 10, 2008.
186. Electronic Properties of Epitaxial Graphene on SiC (invited), J. A. Stroscio, Institute for Solid State Physics, The University of Tokyo, Kashiwa-no-ha, Japan, December 9, 2008.
185. Electronic Properties of Epitaxial Graphene on SiC (invited), J. A. Stroscio, Department of Physics, University of Tokyo, Tokyo, Japan, December 8, 2008.
184. Atomic Scale Properties of Epitaxial Graphene Grown on SiC, G. M. Rutter, P. N. First, and J. A. Stroscio, AVS 55th International Symposium and Exhibition, Boston, MA, October 19, 2008.
183. Atomic Scale Investigation of Mn Impurities on the InAs(110) Surface, Young J. Song, G. M. Rutter, P. N. First, N. Zhitenev, and J. A. Stroscio, AVS 55th International Symposium and Exhibition, Boston, MA, October 19, 2008.
182. Construction of a mK High Field Scanning Tunneling Microscope System, Young J. Song, S. R. Blankenship, and J. A. Stroscio, 2008 International Conference on Nanoscience and Technology, Keystone, CO, July 21, 2008.
181. Single Atom Substitution of Mn in InAs Studied with STM/STS, G. M. Rutter, P. First, Y. J. Song, N. Zhitenev, and J. Stroscio, 2008 International Conference on Nanoscience and Technology, Keystone, CO, July 21, 2008.
180. Landau Quantization in the 2DEG of Mn/InAs(110) Studied with Scanning Tunneling Spectroscopy, Y. J. Song, G. M. Rutter, P. First, N. Zhitenev, and J. Stroscio, 2008 International Conference on Nanoscience and Technology, Keystone, Co, July 21, 2008.

179. Construction of a Ultra Low Temperature Scanning Tunneling Microscope System, Y. J. Song, S. R. Blankenship, J. N. Crain, and J. A. Stroscio, UMD Nanoday 08, College Park, Maryland, May 14th, 2008.
178. Speed Bumps in Graphene (invited), J. A. Stroscio, Nanoelectronics Days 2008, Aachen, Germany, May 13, 2008.
177. Investigation of Acceptor States and Landau Levels in (In,Mn)As by Scanning Tunneling Spectroscopy, Y. J. Song, G. M. Rutter, P. First, N. Zhitenev, and J. Stroscio, APS March Meeting, New Orleans, Louisiana, March 10, 2008.
176. Exposure of Epitaxial Graphene on SiC(0001) to Atomic Hydrogen, N. P. Guisinger, G. M. Rutter, J. N. Crain, P. N. First, and J. A. Stroscio, APS March Meeting, New Orleans, Louisiana, March 10, 2008.
175. Structural and Electronic Properties of Bilayer Epitaxial Graphene, G. M. Rutter, P. N. First, J. N. Crain, and J. A. Stroscio, APS March Meeting, New Orleans, Louisiana, March 10, 2008.
174. Speed Bumps in Graphene (invited), J. A. Stroscio, Condensed Matter Seminar, University of Maryland, College Park, MD, November 15, 2007.
173. Probing the interface between graphene and SiC at the atomic-scale, N. P. Guisinger, G. M. Rutter, J. N. Crain, E. A. A. Jarvis, M. D. Stiles, P. N. First, and J. A. Stroscio, AVS 54th International Symposium and Exhibition, Seattle, WA, October 15, 2007.
172. Quasiparticle Interference and Localization in Epitaxial Graphene, G. M. Rutter, J. N. Crain, N. P. Guisinger, P. N. First, and J. A. Stroscio, AVS 54th International Symposium and Exhibition, Seattle, WA, October 15, 2007.
171. Construction of a Ultra Low Temperature Scanning Tunneling Microscope System, Y. J. Song, S. R. Blankenship, J. N. Crain, and J. A. Stroscio, AVS 54th International Symposium and Exhibition, Seattle, WA, October 15, 2007.
170. Scattering and Interference in Epitaxial Graphene (invited), J. A. Stroscio, G. M. Rutter, J. N. Crain, T. Li, and P. N. First, International Conference on Nanoscale Science and Technology, Stockholm, Sweden, July 2, 2007.
169. Scanning Tunneling Noise Spectroscopy of Atom Dynamics at Cu(111) Surfaces, J. N. Crain, J. A. Stroscio, and R. J. Celotta, Gordon Conference: Dynamics on Surfaces, Proctor Academy, Andover, NH, August 16, 2007.
168. Scanning Tunneling Microscopy of Low-Dimensional Systems, J. N. Crain, D. T. Pierce, J. A. Stroscio, M. D. Stiles, E. Jarvis, G. Rutter, N. Guisinger, T. Li, and P. N. First, KRISS-NIST Joint Workshop on Nanotechnology and Quality of Life, Reston, VA, August 10, 2007.

167. Scattering and Interference in Epitaxial Graphene, J. N. Crain, G. Rutter, N. Guisinger, T. Li, P. N. First, M. D. Stiles, E. Jarvis, and J. A. Stroscio, Nanoscale Material Science Department, EMPA, Dübendorf, Switzerland, July 19, 2007.
166. Imaging Electronic Interference Effects in Ultrathin Epitaxial Graphene, J. N. Crain, G. Rutter, J. A. Stroscio, T. Li, and P. N. First, 2007 APS March Meeting, Denver, CO, March 8, 2007.
165. Design of a 20 mK/15 T STM System with New Functionalities. Y. J. Song, S. R. Blankenship, J. N. Crain, and J. A. Stroscio, 2007 APS March Meeting, Denver, CO, March 8, 2007
164. Measurements of Atom Dynamics in Atomically Engineered Nanostructures (invited), J. A. Stroscio, F. Tavazza, J. N. Crain, R. J. Celotta, and A. Chaka, 232nd American Chemical Society National Meeting, San Francisco, CA, September 10, 2006.
163. Measurements of Atom Dynamics in Engineered Nanostructures using Scanning Tunneling Noise Spectroscopy (invited), J. A. Stroscio, International Conference on Nanoscience and Technology, Basel, Switzerland, July 30, 2006.
162. Scanning Tunneling Noise Spectroscopy of Atom Dynamics (invited), J. A. Stroscio, 4th International Conference on Scanning Probe Spectroscopy, Hamburg, Germany, July 24, 2006.
161. Measurements of Molecular Dynamics in Atomically Engineered Molecular Nanostructures, J. A. Stroscio and R. J. Celotta, American Physical Society 2006 March Meeting, Baltimore, MD, March 15, 2006.
- 160.. Atom Manipulation and Measurement of Atom Motion in Atomically Engineered Molecular Nanostructures (invited), J. A. Stroscio, The Woodward Lecture Series in Chemical Sciences-Harvard/MIT Physical Chemistry Seminar, Cambridge, MA, February 16, 2006.
159. Atom Manipulation and Measurement of Atom Motion in Atomically Engineered Molecular Nanostructures (invited), J. A. Stroscio, Center for the Physics of Materials Seminar, McGill University, Montreal, Canada, February 2, 2006.
158. Atom Manipulation and Measurement of Atom Motion in Atomically Engineered Molecular Nanostructures (invited), J. A. Stroscio, Materials Science and Engineering Colloquium, Northwestern University, Evanston, IL, January 24, 2006.
157. Physical Processes in Atom Manipulation and Creation of Novel Nanostructures of Co and Cu Atoms on Cu(111) Surfaces (invited), J. A. Stroscio and R. J. Celotta, 52nd AVS International Symposium, Boston, MA, November 2, 2005.
156. Physical Processes in Atom Manipulation and Creation of Novel Nanostructures (invited), J. A. Stroscio and R. J. Celotta, 2005 Nano Summit Research Conference, Houston, TX, July 28, 2005.
155. Atom Manipulation Dynamics of Co and Cu on Cu(111) Surfaces, J. A. Stroscio and R. J. Celotta, 13th International Conference on Scanning Tunneling Microscopy/ Spectroscopy and Related Techniques, Sapporo, Japan, July 5, 2005.

154. "Hip Hop" Atoms (invited), J. A. Stroschio, Department of Physics Colloquium, University of Texas-Austin, Austin, TX, April 5, 2005.
153. Controlling the Dynamics of a Single Atom in Lateral Atom Manipulation (invited), J. A. Stroschio, APS March 2005 Meeting, Los Angeles, CA, March 21, 2005.
152. Listening to Atoms in Atom Manipulation and Autonomous Atom Assembly (invited), J. A. Stroschio, AAAS Annual Meeting, Washington, DC, February 17, 2005.
151. "Hip Hop" Atoms (invited), J. A. Stroschio, Sigma Xi Colloquium, Naval Research Laboratory, Washington, DC, January 28, 2005.
150. Listening to Atoms in Atomic Manipulation and Autonomous Atom Assembly (invited), J. A. Stroschio and R. J. Celotta, Research Conference on Molecular Nano-Machines, Les Houches, France, January 17, 2005.
149. Controlling the Dynamics of a Single Atom in Lateral Atom Manipulation (invited), J. A. Stroschio and R. J. Celotta, The Third International Workshop on Nanoscale Spectroscopy and Nanotechnology, College Park, MD, December 11, 2004.
148. Listening to Atom Dynamics During Atomic Manipulation, J. A. Stroschio and R. J. Celotta, AVS 51st International Symposium, Anaheim, CA, November 15, 2004.
147. Listening to Atoms in Atomic Manipulation and Autonomous Atom Assembly (invited), J. A. Stroschio and R. J. Celotta, International Symposium on Atom Manipulation, Single Spins and Atomic Forces: Perspectives in the Nanoscale Era, Hamburg, Germany, October 14, 2004.
146. Listening to Atoms in Atomic Manipulation and Autonomous Atom Assembly (invited), J. A. Stroschio and R. J. Celotta, University of Augsburg, Augsburg, Germany, October 12, 2004.
145. Dynamics of Atoms in Atom Manipulation with the Scanning Tunneling Microscope (invited), J. A. Stroschio and R. J. Celotta, Max Planck Institute for Solid State Research, Stuttgart, Germany, October 11, 2004.
144. Single Atom Dynamics During Nanofabrication, R. J. Celotta and J. A. Stroschio, Gordon Research Conferences on Magnetic Nanostructures, Big Sky, MT, August 24, 2004.
143. Dynamics of a Single Atom in Lateral Atom Manipulation, J. A. Stroschio and R. J. Celotta, 2004 Gordon Research Conferences on The Chemistry & Physics of Nanostructure Fabrication, Tilton, NH, July 19, 2004.
142. Real-Space Imaging of the Vortex Lattice in V3Si Using Low Temperature Scanning Tunneling Microscopy, J. A. Stroschio, C. E. Sosolik, E. W. Hudson, S. R. Blankenship, A. P. Fein, and R. J. Celotta, American Vacuum Society 50th International Symposium, Baltimore, MD, November 6, 2003.
141. Autonomous Atom Assembly, R. J. Celotta, J. A. Stroschio, A. P. Fein, A. Lacaze, J. Cugini, S. R. Blankenship, and S. B. Balakirsky, American Vacuum Society 50th International Symposium, Baltimore, MD, November 6, 2003.

140. Autonomous Atom Assembly, R. J. Celotta, J. A. Stroscio, A. P. Fein, A. Lacaze, J. Cugini, S. R. Blankenship, and S. B. Balakirsky, Organizing Atoms: The Manipulation of Matter on the Sub-10 Nanometre Scale Workshop, The Royal Society, London, UK, October 15, 2003.
139. Atomic Scale Measurement and Fabrication (invited), J. A. Stroscio, Trends in Nanotechnology 2003 Conference, Salamanca, Spain, September 15, 2003.
138. Real-Space Imaging of Structural Transitions in a Vortex Lattice, C. E. Sosolik, J. A. Stroscio, M. D. Stiles, E. W. Hudson, S. R. Blankenship, A. P. Fein, and R. J. Celotta, STM2003, Eindhoven, The Netherlands, July 24, 2003.
137. Autonomous Atom Assembly Using a Scanning Tunneling Microscope (invited), J. A. Stroscio, R. J. Celotta, A. P. Fein, A. Lacaze, J. Cugini, and S. R. Blankenship, STM2003, Eindhoven, The Netherlands, July 23, 2003.
136. Measurement and Fabrication on the Atomic Scale (invited), J. A. Stroscio, MEMS Alliance Special Topics Symposium, University of Maryland, College Park, MD, April 11, 2003.
135. Real-Space Imaging of Structural Transitions in a Vortex Lattice, C. E. Sosolik, J. A. Stroscio, M. D. Stiles, E. W. Hudson, S. R. Blankenship, A. P. Fein, and R. J. Celotta, APS March 2003 Meeting, Austin, TX, March 7, 2003.
134. Real-Space Imaging of Structural Transitions in a Vortex Lattice (invited), C. E. Sosolik, J. A. Stroscio, M. D. Stiles, E. W. Hudson, S. R. Blankenship, A. P. Fein, and R. J. Celotta, Department of Physics, University of Minnesota, Minneapolis, MN, February 25, 2003.
133. Real-Space Imaging of Structural Transitions in a Vortex Lattice (invited), C. E. Sosolik, J. A. Stroscio, M. D. Stiles, E. W. Hudson, S. R. Blankenship, A. P. Fein, and R. J. Celotta, Department of Physics, Massachusetts Institute of Technology, Cambridge, MA, February 18, 2003.
132. Real-Space Imaging of Structural Transitions in a Vortex Lattice (invited), C. E. Sosolik, J. A. Stroscio, M. D. Stiles, E. W. Hudson, S. R. Blankenship, A. P. Fein, and R. J. Celotta, Department of Physics & Astronomy, Clemson University, Clemson, S.C., January 29, 2003.
131. Nano Metrology with the STM: Metal Film Growth on Metal Surfaces (invited), D. T. Pierce, J. A. Stroscio, R. A. Dragoset, A. Davies, and R. J. Celotta, Workshop on Nano Metrology of Materials, NIST, Gaithersburg, MD, January 28, 2003.
130. Scanning Probe Microscopy at Cryogenic Temperatures and High Magnetic Fields (invited), J. A. Stroscio, C. E. Sosolik, R. J. Celotta, A. P. Fein, S. R. Blankenship, and A. H. Band, Workshop on Nano Metrology of Materials, NIST, Gaithersburg, MD, January 27, 2003.
129. Design and Operation of the Nanoscale Physics Facility in the NIST Physics Laboratory (invited), J. A. Stroscio, C. E. Sosolik, R. J. Celotta, A. P. Fein, S. R. Blankenship, and A. H. Band, Buildings for Advanced Technology Workshop, NIST, Gaithersburg, MD, January 14, 2003.

128. Asymmetry and Fermi Liquid Effects in Scanning Tunneling Spectroscopy of V_3Si , C. E. Sosolik, E. W. Hudson, J. A. Stroscio, S. R. Blankenship, A. P. Fein, and R. J. Celotta, IEEE Conference on Nanotechnology, Washington, D.C., August 26, 2002.
127. Asymmetry and Fermi Liquid Effects in Scanning Tunneling Spectroscopy of V_3Si , C. E. Sosolik, E. W. Hudson, J. A. Stroscio, S. R. Blankenship, A. P. Fein, and R. J. Celotta, Physical Electronics Conference, Georgia Institute of Technology, Atlanta, GA, June 14, 2002.
126. Superconducting Spin Detection in Vacuum Tunneling (invited), J. A. Stroscio, Gordon Research Conference on Magnetic Nanostructures, Il Ciocco, Barga, Italy, May 16, 2002.
125. Spin Polarized Vacuum Tunneling from a Conventional Superconductor, C. E. Sosolik, E. W. Hudson, J. A. Stroscio, S. R. Blankenship, A. P. Fein, and R. J. Celotta, 2002 APS March Meeting, Indianapolis, IN, March 18, 2002.
124. Tunneling Asymmetry in Spectroscopy of the Conventional Superconductor V_3Si , E. W. Hudson, C. E. Sosolik, J. A. Stroscio, S. R. Blankenship, A. P. Fein, and R. J. Celotta, 2002 APS March Meeting, Indianapolis, IN, March 18, 2002.
123. A Low Temperature STM System for the Study of Atomic Manipulation and Quantum Electronic Systems, J. A. Stroscio, R. J. Celotta, S. R. Blankenship, E. W. Hudson, and A. P. Fein, Eleventh International Conference on Scanning Tunneling Microscopy/Spectroscopy and Related Techniques, Vancouver, Canada, July 17, 2001.
122. Having Fun with Nanoscale Physics (invited), J. A. Stroscio, SURF Students, NIST, July 11, 2001.
121. A Low Temperature STM for the Study of Quantum and Spin Electronic Systems, J. A. Stroscio, R. J. Celotta, S. R. Blankenship, E. W. Hudson, and A. P. Fein, American Physical Society March Meeting, Seattle, WA, March 14, 2001.
120. Magnetic Coupling in Fe/Mn/Fe: Insight from a Microscopic STM View, D. T. Pierce, A. Davies, J. A. Stroscio, D. A. Tulchinsky, J. Unguris, and R. J. Celotta, 16th International Colloquium on Magnetic Films and Surfaces, Natal, Brazil, August 15, 2000.
119. A Low Temperature/High Field STM System for the Study of Quantum Electronic Systems, J. A. Stroscio and R. J. Celotta, American Physical Society, Atlanta, GA, March 24, 1999.
118. Non-Collinear Exchange Coupling in Fe/Mn/Fe (001) and Structure of the Mn Spacer Layer, D. T. Pierce, A. Davies, J. A. Stroscio, D. A. Tulchinsky, J. Unguris, and R. J. Celotta, 43rd Annual Conference on Magnetism and Magnetic Materials, Miami, FL, November 12, 1998.
117. A Low Temperature STM System for the Study of Quantum Electronic Systems, J. A. Stroscio and R. J. Celotta, 45th AVS International Symposium, Baltimore, MD, November 5, 1998.
116. Consideration on Using GaAs tips for Spin Polarized Scanning Tunneling Microscopy, D. T. Pierce, A. Davies, R. J. Celotta, and J. A. Stroscio, LE98, Low Energy Polarized Electron Workshop, St. Petersburg, Russia, September 5, 1998.

115. The Role of the Interface in the Exchange Coupling of Magnetic Layers (invited), J. A. Stroschio, A. Davies, D. T. Pierce, and R. J. Celotta, 14th International Vacuum Congress, Birmingham, England, September 1, 1998.
114. Atomic-scale Characterization of Magnetic Multilayers with Scanning Tunneling Microscopy, A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, Physics Department Seminar, University of Arkansas, Fayetteville, AR, February 27, 1998.
113. Atomic-Scale Study of Interfacial Alloying in the Growth of Cr on Fe(001), D. T. Pierce, A. Davies, J. A. Stroschio, and R. J. Celotta, MRS Meeting, Boston, MA, December 4, 1997.
112. Atomic Scale Characterization of Magnetic Thin Film Structures, A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, 3rd International Workshop on Quantum Functional Devices, Gaithersburg, MD, November 7, 1997.
111. Towards Measuring Surface Magnetization with Atomic Resolution, D. T. Pierce, J. A. Stroschio, J. Unguris, and R. J. Celotta, International Conference on Magnetism, Cairns, Australia, July 29, 1997.
110. Tunneling Spectroscopy of Magnetic Impurities and Thin Films, A. Davies, D. T. Pierce, J. A. Stroschio, and R. J. Celotta, 9th International Conference on Scanning Tunneling Microscopy/Spectroscopy and Related Techniques, Hamburg, Germany, July 24, 1997.
109. Polarization Effects in STM-induced Light Emission, A. Davies, D. T. Pierce, J. A. Stroschio, and R. J. Celotta, 9th International Conference on Scanning Tunneling Microscopy/Spectroscopy and Related Techniques, Hamburg, Germany, July 23, 1997.
108. Probing Magnetic Surfaces Using Scanning Tunneling Microscopy (invited), J. A. Stroschio, A. Davies, D. T. Pierce, and R. J. Celotta, International Symposium on Growth, Structure, and Magnetism of Thin Films, Fritz-Haber-Institut/Max-Planck-Gesellschaft, Berlin, Germany, May 2, 1997.
107. Atomic-Scale Characterization of Magnetic Multilayers with Scanning Tunneling Microscopy, A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, Carnegie Mellon University, Pittsburgh, PA, April 17, 1997.
106. Effect of Interfacial Roughness on Exchange Coupling (invited), J. Unguris, R. J. Celotta, A. Davies, D. T. Pierce, and J. A. Stroschio, Magnetism and Magnetic Materials Conference, Atlanta, GA, November 14, 1996.
105. Polarization of Light Emitted from the STM Tunnel Junction, D. T. Pierce, J. A. Stroschio, and R. J. Celotta, American Vacuum Society, Philadelphia, PA, October 14, 1996.
104. Atomic Scale Observations of Alloying at the Cr-Fe Interface (invited), J. A. Stroschio, Chemistry Department, Lehigh University, Bethlehem, PA, September 18, 1996.
103. Alloying in CrFe Multilayers, A. Davies, J. A. Stroschio, D. T. Pierce, J. Unguris, and R. J. Celotta, Physics Dept., University of Basel, Basel, Switzerland, June 12, 1996.

102. Alloying in CrFe Multilayers, A. Davies, J. A. Stroschio, D. T. Pierce, J. Unguris, and R. J. Celotta, Physics Dept., University of Bochum, Bochum, Germany, June 11, 1996.
101. Alloying in CrFe Multilayers, A. Davies, J. A. Stroschio, D. T. Pierce, J. Unguris, and R. J. Celotta, KFA - Research Center Jülich, Jülich, Germany, June 10, 1996.
100. Alloying in CrFe Multilayers, A. Davies, J. A. Stroschio, D. T. Pierce, J. Unguris, and R. J. Celotta, European MRS meeting, Strasbourg, France, June 6, 1996.
99. Atomic-Scale Observations of Alloying in Cr/Fe(001), A. Davies, J. A. Stroschio, D. T. Pierce, J. Unguris, and R. J. Celotta, Workshop on Cr/Fe Interface Magnetism, Strasbourg, France, June 2, 1996.
98. Learning about Growth from STM Measurements (invited), J. A. Stroschio, Scanning Microscopy 1996, Bethesda, MD, May 13, 1996.
97. Nucleation and Growth in Metal on Metal Epitaxy (invited), J. A. Stroschio, United Kingdom Annual Scanned Probe Microscopy Meeting, St. John's College, Oxford, United Kingdom, April 10, 1996.
96. Tunneling Spectroscopy Characteristics of bcc(001) Surfaces, A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, American Physical Society, St. Louis, MO, March 19, 1996.
95. The Effect of Roughness in Fe/Cr/Fe Multilayers (invited), J. A. Stroschio, 42nd National Symposium of the American Vacuum Society, Minneapolis, MN, October 17, 1995.
94. Alloy Formation During Cr Growth on Fe(001), A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, 42nd National Symposium of the American Vacuum Society, Minneapolis, MN, October 17, 1995.
93. The Role of the Interface in the Exchange Coupled Fe/Cr/Fe System, R. J. Celotta, J. A. Stroschio, and D. T. Pierce, Gordon Research Conference on Magnetic Nanostructures, Irsee, Germany, September 18, 1995.
92. Observations of Alloying in Cr Growth on Fe(001), A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, 8th International Conference on Scanning Tunneling Microscopy and Related Techniques, Snowmass, CO, July 23, 1995.
91. Tunneling Spectroscopy of bcc(001) Surface States of Fe and Cr, J. A. Stroschio, A. Davies, D. T. Pierce, and R. J. Celotta, 8th International Conference on Scanning Tunneling Microscopy and Related Techniques, Snowmass, CO, July 23, 1995.
90. An Atomic View of Metal on Metal Growth (invited), J. A. Stroschio, Physics Department, University of MD, College Park, MD, April 27, 1995.
89. An Atomic View of the Growth of Ultra-Thin Magnetic Films (invited), J. A. Stroschio, D. T. Pierce, A. Davies, and R. J. Celotta, American Physical Society and the American Association of Physics Teachers, Washington, DC, April 19, 1995.

88. An Atomic View of Metal on Metal Growth (invited), J. A. Stroschio, Chemistry Department Colloquium, Penn State University, State College, PA, April 12, 1995.
87. Evidence of Alloying in Cr/Fe Heterostructures, A. Davies, J. A. Stroschio, D. T. Pierce, and R. J. Celotta, American Physical Society, San Jose, CA, March 24, 1995.
86. An Atomic View of Growth from Nucleation to Multilayers (invited), J. A. Stroschio, D. T. Pierce, R. J. Celotta, M. D. Stiles, and A. Zangwill, Materials Research Society, Boston, MA, November 28, 1994.
85. An Atomic View of Growth (invited), J. A. Stroschio, University of Pennsylvania, Physics Department Colloquium, Philadelphia, PA, November 15, 1994.
84. Scaling Properties of Fe Growth on Fe(001) Whiskers, J. A. Stroschio and D. T. Pierce, 41st National Symposium of the American Vacuum Society, Denver, CO, October 24, 1994.
83. Influence of Cr Thickness Fluctuations on Exchange Coupling in Fe/Cr/Fe(100), D. T. Pierce, J. A. Stroschio, J. Unguris, and R. J. Celotta, Joint Meeting of the 14th International Colloquium on Magnetic Films and Surfaces at the European Materials Research Society Symposium on Magnetic Ultrathin Films, Multi-layers, and Surfaces, Dusseldorf, Germany, August 29, 1994.
82. Influence of Cr Growth on Exchange Coupling in Fe/Cr/Fe(100) (invited), J. A. Stroschio, D. T. Pierce, J. Unguris, and R. J. Celotta, 6th Joint MMM-Intermag Conference, Albuquerque, NM, June 20, 1994.
81. Correlation of Exchange Coupling on Fe/Cr/Fe(100) with STM Measurements of Thickness Fluctuations in Cr Films, D. T. Pierce, J. A. Stroschio, J. Unguris, and R. J. Celotta, American Physical Society, Pittsburgh, PA, March 22, 1994.
80. Scaling of Diffusion-Mediated Growth in Iron on Iron Homoepitaxy, J. A. Stroschio and D. T. Pierce, American Physical Society, Pittsburgh, PA, March 21, 1994.
79. Fe/Cr/Fe(100) Exchange Coupling vs. Cr Growth, J. Unguris, D. T. Pierce, R. J. Celotta, and J. A. Stroschio, Magnetism and Magnetic Materials Conference, Minneapolis, MN, November 14, 1993.
78. Nucleation and Growth of Metals on Metals (invited), J. A. Stroschio, D. T. Pierce, and R. J. Celotta, International Conference on Scanning Tunneling Microscopy, Beijing, China, August 10, 1993.
77. STM Study of the Growth of Cr/Fe(001): Correlation with Exchange Coupling of Magnetic Layers, D. T. Pierce, J. A. Stroschio, J. Unguris, and R. J. Celotta, International Conference on Scanning Tunneling Microscopy, Beijing, China, August 9, 1993.
76. STM and RHEED Studies of Magnetic Growth (invited), J. A. Stroschio, D. T. Pierce, and R. J. Celotta, Materials Research Society, San Francisco, CA, April 12, 1993.
75. STM and RHEED Study of the Growth of Fe on Fe(001), D. T. Pierce, J. A. Stroschio, and R. J. Celotta, American Physical Society, Seattle, WA, March 23, 1993.

74. Metal on Metal Growth (invited), J. A. Stroscio, Gordon Research Conference on Frontiers of Scanning Tunneling Microscopy, Ventura, CA, March 15, 1993.
73. Probing Low Dimensional Systems on the Nanometer Scale (invited), J. A. Stroscio, American Association for the Advancement of Science, Boston, MA, February 16, 1993.
72. Oscillations in Exchange Coupling Between Magnetic Layers, R. J. Celotta, J. Unguris, D. T. Pierce, and J. A. Stroscio, Magnetism and Magnetic Materials, Houston, TX, December 2, 1992.
71. Biquadratic Exchange Coupling in Fe/Cr/Fe(100) and Fe/Ag/Fe(100) Thin Film Sandwiches, J. Unguris, R. J. Celotta, D. T. Pierce, and J. A. Stroscio, Magnetism and Magnetic Materials, Houston, TX, December 2, 1992.
70. Scanning Tunneling Microscopy Applied to the Growth of Materials (invited), J. A. Stroscio, Materials Research Society Meeting, Boston, MA, November 30, 1992.
69. Nucleation and Growth in Homoepitaxy of Fe on Fe(001) Whiskers (invited), J. A. Stroscio, 39th National AVS Symposium, Chicago, IL, November 9, 1992.
68. Metal on Metal Growth Studied with STM and RHEED Measurements (invited), J. A. Stroscio, 204th American Chemical Society Meeting, Washington, DC, August 25, 1992.
67. The Observation of Magnetic Exchange Coupling, R. J. Celotta, J. Unguris, D. T. Pierce, and J. A. Stroscio, Physics Department, New York University, New York, NY, April 25, 1992.
66. Insulating Alkali Phases on III-V Surfaces Studied with Scanning Tunneling Microscopy (invited), J. A. Stroscio, Cornell University, Solid State Physics Seminar, Ithaca, NY, April 21, 1992.
65. Atomic Manipulation with the Scanning Tunneling Microscope (invited), J. A. Stroscio, American Physical Society, Indianapolis, IN, March 16, 1992.
64. Homoepitaxy of Fe on Fe(001): Correlation Between RHEED and STM Measurements, J. A. Stroscio, D. T. Pierce, R. A. Dragoset, and R. J. Celotta, American Physical Society, Indianapolis, IN, March 16, 1992.
63. Microscopic Aspects of Metal on Metal Epitaxy: Comparison of STM and RHEED Measurements (invited), J. A. Stroscio, Nanoelectronics ARI Seminar, Naval Research Laboratory, Washington, DC, February 25, 1992.
62. Atomic Manipulation of Polarizable Atoms by Electric Field Induced Directional Diffusion (invited), J. A. Stroscio, International Workshop on Atoms and Clusters (WAC), Atami, Shizuoka, Japan, January 8, 1992.
61. Microscopic Aspects of Metal on Metal Epitaxy (invited), J. A. Stroscio, Atomic Technology Institute, Tokyo, Japan, January 6, 1992.

60. STM Studies of Insulating Alkali Overlayers on InSb(110), L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, 38th National Symposium of the American Vacuum Society, Seattle, WA, November 14, 1991.
59. Microscopic Aspects of the Growth of fcc Iron on the Au(111) Surface, J. A. Stroscio, D. T. Pierce, and R. A. Dragoset, 38th National Symposium of the American Vacuum Society, Washington State Convention Center, Seattle, WA, November 11, 1991.
58. Spin-Polarized Scanning Tunneling Microscopy (invited), J. A. Stroscio, Surface Lunch Bunch, NIST, Gaithersburg, MD, October 28, 1991.
57. Geometric and Electronic Properties of Alkali Metals on III-V(110) Surfaces: from 1- and 2-D Insulators to 3-D Metals (invited), J. A. Stroscio, 4th Chemical Conference, New York, NY, August 29, 1991.
56. Scanning Tunneling Microscopy of Metals: Microscopic Aspects of the Nucleation of Fe on the Au(111) Surface, J. A. Stroscio, D. T. Pierce, R. A. Dragoset, and R. J. Celotta, 6th International Conference on Scanning Tunneling Microscopy, Interlaken, Switzerland, August 16, 1991.
55. Atomic Manipulation of Polarizable Atoms by Electric Field-Induced Directional Diffusion (invited), J. A. Stroscio, 6th International Conference on Scanning Tunneling Microscopy, Interlaken, Switzerland, August 16, 1991.
54. The Geometric and Electronic Properties of 1-, 2-, and 3-Dimensional Alkali Metal Structures on III-V(110) Semiconductors, R. A. Dragoset, L. J. Whitman, J. A. Stroscio, and R. J. Celotta, 6th International Conference on Scanning Tunneling Microscopy, Interlaken, Switzerland, August 15, 1991.
53. Scanning Tunneling Microscopy of Metal Surfaces (invited), J. A. Stroscio, Surface Lunch Bunch, NIST, Gaithersburg, MD, April 22, 1991.
52. Geometric and Electronic Properties of Cs Structures on III-V(110) Surfaces, L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, American Physical Society Meeting, Cincinnati, OH, March 22, 1991.
51. Nucleation and Growth of Ultra-Thin Fe Films on the Au(111) Surface, J. A. Stroscio, R. A. Dragoset, D. T. Pierce, and R. J. Celotta, American Physical Society Meeting, Cincinnati, OH, March 19, 1991.
50. STM Studies of the Interaction of Alkali and Transition Metals on III-V(110) Surfaces (invited), J. A. Stroscio, Materials Research Society Meeting, Boston, MA, November 26, 1990.
49. Geometric and Electronic Properties of 1- and 2-Dimensional Cs and Fe Structures (invited), J. A. Stroscio, AT&T Bell Laboratories, Murray Hill, NJ, November 9, 1990.
48. Geometric and Electronic Properties of 1- and 2-Dimensional Cs and Fe Structures (invited), J. A. Stroscio, University of Rhode Island, Kingston, RI, October 26, 1990.

47. STM Studies of Alkali and Transition Metals on III-V(110) Surfaces (invited), J. A. Stroscio, Physics Department Colloquium, New York University, New York, NY, October 25, 1990.
46. Electric Field-Induced Diffusion of Cs on GaAs(110) Observed with STM, L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, 37th Annual Symposium of the American Vacuum Society, Toronto, Canada, October 12, 1990.
45. An STM System for the Study of Magnetic Materials, P. N. First, J. A. Stroscio, D. T. Pierce, R. A. Dragoset, and R. J. Celotta, 5th International Conference on Scanning Tunneling Microscopy, Baltimore, MD, July 25, 1990.
44. Scanning Tunneling Microscopy of Clean and Cs-covered InSb(110), L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, 5th International Conference on Scanning Tunneling Microscopy, Baltimore, MD, July 25, 1990.
43. Scanning Tunneling Microscopy of Clean and Cs-Covered InSb(110), L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, 50th Conference on Physical Electronics, Gaithersburg, MD, June 13, 1990.
42. Scanning Probe Measurements with Point Electron Sources, J. A. Stroscio, Scanning 90, Crystal City, VA, April 17, 1990.
41. An STM Study of Clean and Cs-Covered InSb(110), L. J. Whitman, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, American Physical Society Meeting, Anaheim, CA, March 12, 1990.
40. Scanning Tunneling Microscopy of Metal Atom Structures on III-V(110) Surfaces, J. A. Stroscio, Chemical Engineering and Material Science Department, University of Minnesota, Minneapolis, MN, February 27, 1990.
39. Dispersion of Band Gap States Near Metallic Clusters on GaAs(110), P. N. First, J. A. Stroscio, R. A. Dragoset, and R. J. Celotta, 17th Annual Conference of the Physics and Chemistry of Semiconductor Interfaces, Clearwater Beach, FL, January 31, 1990.
38. Scanning Tunneling Microscopy of Metal Atom Structures on GaAs(110) Surfaces, J. A. Stroscio, 36th National Symposium of the American Vacuum Society, Boston, MA, October 23, 1989.
37. Scanning Tunneling Microscopy of Metal Clusters on GaAs(110) (invited), J. A. Stroscio, Electrotechnical Laboratory, Tsukuba, Japan, July 18, 1989.
36. Scanning Tunneling Microscopy of Metal Atom Structures on GaAs(110) Surfaces (invited), J. A. Stroscio, Institute for Solid State Physics, Tokyo, Japan, July 17, 1989.
35. Scanning Tunneling Microscopy of Small Metal Structures on GaAs(110) Surfaces, J. A. Stroscio, P. N. First, R. A. Dragoset, D. T. Pierce, and R. J. Celotta, International STM '89 Meeting, Oarai, Japan, July 9, 1989.
34. Scanning Tunneling Microscopy of Small Metal Particles (invited), J. A. Stroscio, Condensed Matter Physics Seminar, College Park, MD, April 13, 1989.

33. Characterization of Epitaxial Fe on GaAs(110) by Scanning Tunneling Microscopy, P. N. First, J. A. Stroscio, R. A. Dragoset, D. T. Pierce, and R. J. Celotta, Materials Research Society Meeting, San Diego, CA, April 5, 1989.
32. Scanning Tunneling Microscopy, P. N. First, J. A. Stroscio, R. A. Dragoset, D. T. Pierce, and R. J. Celotta, American Physical Society Meeting, St. Louis, MO, March 21, 1989.
31. Onset of Metallicity in Fe Nano-Particles on GaAs(110), P. N. First, J. A. Stroscio, R. A. Dragoset, D. T. Pierce, and R. J. Celotta, 16th Annual Conference on the Physics and Chemistry of Semiconductor Interfaces, Bozeman, MT, February 28, 1989.
30. Microstructure of Epitaxial Fe Films on GaAs(110), J. A. Stroscio, P. N. First, D. T. Pierce, R. A. Dragoset, and R. J. Celotta, American Vacuum Society 35th National Vacuum Symposium and Topical Conference, Atlanta, GA, November 3, 1988.
29. Structure and Electronic Properties of Cs on GaAs(110) Determined by Scanning Tunneling Microscopy, J. A. Stroscio, R. A. Dragoset, D. T. Pierce, and R. J. Celotta, American Vacuum Society 35th National Vacuum Symposium and Topical Conference, Atlanta, GA, November 3, 1988.
28. Probing Magnetic Microstructure on the Nanometer Scale, D. T. Pierce, J. A. Stroscio, P. N. First, R. A. Dragoset, and R. J. Celotta, American Vacuum Society 35th National Vacuum Symposium and Topical Conference, Atlanta, GA, October 5, 1988.
27. Scanning Tunneling Spectroscopy of Single Atoms on Surfaces (invited), J. A. Stroscio, Gordon Research Conference on Electron Spectroscopy, Wolfeboro, NH, July 18, 1988.
26. Structure and Electronic Properties of One-Dimensioned Atomic Cs Chains on GaAs(110) by Scanning Tunneling Microscopy, J. A. Stroscio, R. A. Dragoset, and P. N. First, 3rd International Conference on Scanning Tunneling Microscopy, University Museum, Oxford, England, July 7, 1988.
25. Vacuum Tunneling Properties of Cesium GaAs(110) Surfaces, J. A. Stroscio, R. A. Dragoset, P. N. First, D. T. Pierce, and R. J. Celotta, 1st International Vacuum Microelectronics Conference, Williamsburg, VA, June 13, 1988.
24. Scanning Tunneling Microscopy of Adsorbates on Surfaces (invited), J. A. Stroscio, Middle Atlantic Regional Meeting of the American Chemical Society, Millersville University, Millersville, PA, May 25, 1988.
23. STM Applied to Si and GaAs (invited), J. A. Stroscio, RAC Symposium on NBS Activities in Scanning Tunneling Microscopy, Gaithersburg, MD, May 20, 1988.
22. Observation of Single Atom Adsorbates with the Scanning Tunneling Microscope (invited), J. A. Stroscio, American Physical Society Meeting, New Orleans, LA, March 21, 1988.
21. Scanning Tunneling Microscopy of Semiconductor Surfaces (invited), J. A. Stroscio, 15th Annual Conference of the Physics and Chemistry of Semiconductor Interfaces, Asilomar, CA, February 2, 1988.

20. Scanning Tunneling Microscopy of Adsorbed Atoms on Semiconductor Surfaces, J. A. Stroscio and R. M. Feenstra, 34th National Symposium of the American Vacuum Society, Anaheim, CA, November 2, 1987.
19. STM Observations of Oxygen Adsorbed on GaAs(110) (invited), J. A. Stroscio, Gordon Research Conference on the Dynamics of Gas-Surface Interactions, Andover, NH, August 13, 1987.
18. Scanning Tunneling Microscopy of Adsorbed Atoms on Semiconductor Surfaces (invited), J. A. Stroscio, Adriatico Research Conference on Scanning Tunneling Microscopy-Fundamental Experimental and Theoretical Progress, International Center for Theoretical Physics, Trieste, Italy, July 28, 1987.
17. Energy Dependence of the Local Density in STM Studies of Clean and Oxygen Covered GaAs(110) Surfaces (invited), J. A. Stroscio, STM '87 Second International Conference on Scanning Tunneling Microscopy/Spectroscopy, Oxnard, CA, July 20, 1987.
16. Scanning Tunneling Microscopy of Si and GaAs Surfaces (invited), J. A. Stroscio, IBM Almaden Research Center, San Jose, CA, July 19, 1987.
15. Scanning Tunneling Microscopy of Clean and Adsorbate Covered Semiconductor Surfaces (invited), J. A. Stroscio, Los Alamos National Laboratory, Los Alamos, NM, July 15, 1987.
14. Scanning Tunneling Microscopy of Clean and Oxygen Covered GaAs(110) (invited), J. A. Stroscio, AT&T Bell Laboratories, Holmdel, NJ, May 7, 1987.
13. Scanning Tunneling Microscopy of Oxygen Adsorbed on the GaAs(110) Surface, J. A. Stroscio, R. M. Feenstra, and A. P. Fein, American Physical Society Meeting, New York, NY, March 16, 1987.
12. Seeing the Color of Atoms by Exploiting the Energy Dependence of the Local State Density in Scanning Tunneling Microscopy (invited), J. A. Stroscio, Surface Science Colloquium, Cornell University, Ithaca, NY, February 11, 1987.
11. Electronic Surface States Observed in Scanning Tunneling Microscopy Studies of Silicon and Gallium Arsenide Surfaces (invited), J. A. Stroscio, Sigma IX, The Scientific Research Society, Olin Chapter, Cheshire, CT, January 16, 1987.
10. Semiconductor Surface States Observed by Scanning Tunneling Microscopy (invited), J. A. Stroscio, Symposium on Scanning Tunneling Microscopy, Greater New York Chapter of the American Vacuum Society, IBM, Yorktown Heights, NY, November 12, 1986.
9. Observation of Parity Reversal in Real Space Imaging of Surface State Wavefunctions on the Si(111) 2x1 Surface, J. A. Stroscio, R. M. Feenstra, and A. P. Fein, 33rd National Symposium of the American Vacuum Society, Baltimore, MD, October 27, 1986.
8. Recent Developments in Scanning Tunneling Microscopy (invited), J. A. Stroscio, Solid State Physics Colloquium, Brown University, Providence, RI, October 16, 1986.

7. Imaging Electronics Surface States in Scanning Tunneling Microscopy Studies of Cleaved Si and GaAs Surfaces, J. A. Stroscio, R. M. Feenstra, and A. P. Fein, ITL S/C Process Technology Meeting, IBM, Yorktown Heights, NY, September 24, 1986.
6. Scanning Tunneling Microscopy of Semiconductor Surfaces (invited), J. A. Stroscio, Physics Department Colloquium, University of Rhode Island, Kingston, RI, April 30, 1986.
5. Geometric Structure, Pseudo Bandgaps, and Surface Vibrational Resonances on Metal Surfaces, J. A. Stroscio, M. Persson, C. E. Bartosch, and W. Ho, American Physical Society Meeting, Las Vegas, NV, March 31, 1986.
4. Scanning Tunneling Microscopy and Spectroscopy of Defects on the Cleaved Si(111) Surface, J. A. Stroscio and R. M. Feenstra, American Physical Society Meeting, Las Vegas, NV, March 31, 1986.
3. Quasi-Elastic Scattering of Low Energy Electrons by Conduction Band Surface Plasmons on Si(111)-7x7, J. A. Stroscio and W. Ho, American Physical Society Meeting, Baltimore, MD, March 25, 1985.
2. Observations of a Surface Resonance on Ni(110) by Electron Energy Loss Spectroscopy, J. A. Stroscio, M. Persson, S. R. Bare, and W. Ho, American Vacuum Society 31st National Symposium, Las Vegas, NV, December 31, 1984.
1. Mechanisms for the Adsorption and Catalytic Reactions of Hydrogen and Ethylene on Ni(110), J. A. Stroscio, S. R. Bare, and W. Ho, Materials Research Society Meeting, Boston, MA, November 30, 1983.