KANG-KUEN NI

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Departments of Chemistry and Chemical Biology ◇ Harvard University

RESEARCH

Kang-Kuen Ni pursues new approaches to create and gain quantum control of ultracold molecules for studies of chemical reactions, quantum information processing, and quantum many-body physics. Notable recent achievements include building single molecules in movable optical tweezers, studying collisions in a new paradigm with exactly known numbers of collision partners and products, theoretical investigation of a novel quantum computing scheme with molecules, and probing, steering, and controlling ultracold bimolecular chemical reactions from reactants through intermediates to products with quantum state resolutions.

PROFESSIONAL POSITIONS HELD

Harvard University *Cambridge, MA*
Professor of Chemistry and Chemical Biology *2021 - present*
Morris Kahn Associate Professor of Chemistry and Chemical Biology and of Physics *2019 - 2021*
Assistant Professor of Chemistry and Chemical Biology *2013 - 2019*
Faculty Member, Harvard-MIT Center for Utracold Atoms *2013 - present*

JILA *Boulder, CO*
National Research Council Postdoctoral Fellow *2011 - 2013*
Advisor: Prof. Eric Cornell

California Institute of Technology *Pasadena, CA*
Center for Physics of Information Postdoctoral Fellow *2009 - 2011*
Advisor: Prof. Jeff Kimble

EDUCATION

University of Colorado, Boulder *2003 - 2009*
Ph.D., Physics
Thesis advisor: Prof. Deborah Jin
JILA, the National Institute of Standards and Technology and the University of Colorado, Boulder
A quantum gas of polar molecules

University of California, Santa Barbara *2000 - 2003*
B.S. with Highest Honors

AWARDS AND HONORS

- American Physical Society I.I. Rabi Prize in Atomic, Molecular, and Optical Physics, 2019
- DOE Young Investigator Award, 2018
- Camille Dreyfus Teacher-Scholar Award, 2018
- Packard Fellowship for Science and Engineering, 2016
- Beckman Young Investigator Award, 2015
- Alfred P. Sloan Research Fellow in Physics, 2015

- AFOSR Young Investigator Award, 2015
- The International Organization of Chinese Physicists and Astronomers Outstanding Young Researcher Award (Macronix Prize), 2014
- National Research Council Postdoctoral Fellowship, NIST, 2011 - 2013
- American Physical Society Division of Atomic, Molecular, and Optical Physics Thesis Prize, 2010
- Center for Physics of Information Postdoctoral Fellowship, Caltech, 2009 - 2011
- National Science Foundation Graduate Fellowship, 2004 - 2007
- University of California Leadership Excellence through Advanced Degrees scholar, 2001 - 2003

PUBLICATIONS

[1] Matthew A. Nichols, Yi-Xiang Liu, Lingbang Zhu, Ming-Guang Hu, Yu Liu, and **K.-K. Ni**†. Detection of long-lived complexes in ultracold atom-molecule collisions, 2021.

[2] Sean Burchesky, Loic Anderegg, Yicheng Bao, Scarlett S. Yu, Eunmi Chae, Wolfgang Ketterle, Kang-Kuen Ni, and John M. Doyle. Rotational coherence times of polar molecules in optical tweezers, 2021.

[3] Loïc Anderegg, Sean Burchesky, Yicheng Bao, Scarlett S. Yu, Tijs Karman, Eunmi Chae, **K.-K. Ni**, Wolfgang Ketterle, and John M. Doyle. Observation of microwave shielding of ultracold molecules. *arXiv:2102.04365*, 2021. Science(in press).

[4] William B. Cairncross, Jessie T. Zhang, Lewis R. B. Picard, Yichao Yu, Kenneth Wang, and **K.-K. Ni**†. Assembly of a rovibrational ground state molecule in an optical tweezer. *Physical Review Letters*, 126(12), Mar 2021.

[5] Yu Liu, Ming-Guang Hu, Matthew A. Nichols, Dongzheng Yang, Daiqian Xie, Hua Guo, and **K.-K. Ni**†. Precision test of statistical dynamics with state-to-state ultracold chemistry. *Nature*, 593(7859):379–384, May 2021.

[6] Yichao Yu, Kenneth Wang, Jonathan D. Hood, Lewis R. B. Picard, Jessie T. Zhang, William B. Cairncross, Jeremy M. Hutson, Rosario Gonzalez-Ferez, Till Rosenband, and **K.-K. Ni**†. Coherent optical creation of a single molecule. *arXiv:2012.09043*, 2020. Physics Review X (in press).

[7] Yu Wang, Kenneth Wang, Eliot F. Fenton, Yen-Wei Lin, **K.-K. Ni**†, and Jonathan D. Hood. Reduction of laser intensity noise over 1 MHz band for single atom trapping. *Opt. Express*, 28(21):31209–31215, Oct 2020.

[8] Ming-Guang Hu, Yu Liu, Matthew A. Nichols, Lingbang Zhu, Goulven Quéméner, Olivier Dulieu, and **K.-K. Ni**†. Nuclear spin conservation enables state-to-state control of ultracold molecular reactions. *Nature Chemistry*, 13(5):435–440, 2021.

[9] Jessie T. Zhang, Yichao Yu, William B. Cairncross, Kenneth Wang, Lewis R. B. Picard, Jonathan D. Hood, Yen-Wei Lin, Jeremy M. Hutson, and **K.-K. Ni**†. Forming a single molecule by magnetoassociation in an optical tweezer. *Physics Review Letter*, 124:253401, June 2020.

[10] Yu Liu, Ming-Guang Hu, Matthew A Nichols, David D Grimes, Tijs Karman, Hua Guo, and **K.-K. Ni**†. *Nature Physics*, 16(11):1131–1135, 2020.

[11] Lawrence W. Cheuk, Loïc Anderegg, Yicheng Bao, Sean Burchesky, Scarlett S. Yu, Wolfgang Ketterle, **K.-K. Ni**, and John M. Doyle. Observation of collisions between two ultracold ground-state CaF molecules. *Physical Review Letters*, 125:043401, Jul 2020.

[12] Ehud Altman, Kenneth R. Brown, Giuseppe Carleo, Lincoln D. Carr, Eugene Demler, Cheng Chin, Brian DeMarco, Sophia E. Economou, Mark A. Eriksson, Kai-Mei C. Fu, Markus Greiner, Kaden R.A. Hazzard,

Randall G. Hulet, Alicia J. Kollár, Benjamin L. Lev, Mikhail D. Lukin, Ruichao Ma, Xiao Mi, Shashank Misra, Christopher Monroe, Kater Murch, Zaira Nazario, **K.-K. Ni**, Andrew C. Potter, Pedram Roushan, Mark Saffman, Monika Schleier-Smith, Irfan Siddiqi, Raymond Simmonds, Meenakshi Singh, I.B. Spielman, Kristan Temme, David S. Weiss, Jelena Vučković, Vladan Vuletić, Jun Ye, and Martin Zwierlein. Quantum simulators: Architectures and opportunities. *PRX Quantum*, 2:017003, Feb 2021.

[13] Yu Liu, David D. Grimes, Ming-Guang Hu, and **K.-K. Ni**†. Probing ultracold chemistry using ion spectrometry. *Phys. Chem. Chem. Phys.*, 22:4861–4874, 2020.

[14] M.-G. Hu, Y. Liu, D. D. Grimes, Y.-W. Lin, A. H. Gheorghe, R. Vexiau, N. Bouloufa-Maafa, O. Dulieu, T. Rosenband, and **K.-K. Ni**†. Direct observation of bimolecular reactions of ultracold KRb molecules. *Science*, 366(6469):1111–1115, 2019.

[15] J. D. Hood, Y. Yu, Y.-W. Lin, J. T. Zhang, K. Wang, L. R. Liu, B. Gao, and **K.-K. Ni**†. Multichannel interactions of two atoms in an optical tweezer. *Physics Review Research*, 2:023108, Apr 2020.

[16] **K.-K. Ni**†. The quest for quantum degeneracy. *Nature Physics*, 15(6):526–527, 6 2019.

[17] L. R. Liu, J. D. Hood, Y. Yu, J. T. Zhang, K. Wang, Y.-W. Lin, T. Rosenband, and **K.-K. Ni**†. Molecular assembly of ground-state cooled single atoms. *Physics Review X*, 9:021039, May 2019.

[18] L. Anderegg, L. W. Cheuk, Y. Bao, S. Burchesky, W. Ketterle, **K.-K. Ni**, and J. M. Doyle. An optical tweezer array of ultracold molecules. *Science*, 365(6458):1156–1158, 2019.

[19] **K.-K. Ni**†, T. Rosenband, and D. D. Grimes. Dipolar exchange quantum logic gate with polar molecules. *Chem. Sci.*, 9:6830–6838, 2018.

[20] T. Rosenband, D. D. Grimes, and **K.-K. Ni**. Elliptical polarization for molecular stark shift compensation in deep optical traps. *Opt. Express*, 26(16):19821–19825, Aug 2018.

[21] L. R. Liu, J. D. Hood, Y. Yu, J. T. Zhang, N. R. Hutzler, T. Rosenband, and **K.-K. Ni**†. Building one molecule from a reservoir of two atoms. *Science*, 360(6391):900–903, 2018.

[22] Y. Yu, N. R. Hutzler, J. T. Zhang, L. R. Liu, J. D. Hood, T. Rosenband, and **K.-K. Ni**†. Motional-ground-state cooling outside the lamb-dicke regime. *Physics Review A*, 97:063423, June 2018.

[23] L. R. Liu, J. T. Zhang, Y. Yu, N. R. Hutzler, Y. Liu, T. Rosenband, and **K.-K. Ni**†. Ultracold Molecular Assembly. *ArXiv:1701.03121*, January 2017.

[24] N. R. Hutzler, L. R. Liu, Y. Yu, and **K.-K. Ni**†. Eliminating light shifts for single atom trapping. *New Journal of Physics*, 19(2):023007, 2017.

[25] W. G. Tobias, J. S. Rosenberg, N. R. Hutzler, and **K.-K. Ni**†. A low-temperature external cavity diode laser for broad wavelength tuning. *Review of Scientific Instruments*, 87(11):113104, 2016.

[26] **K.-K. Ni**, H. Loh, M. Grau, K. C. Cossel, J. Ye, and E. A. Cornell. State-specific detection of trapped HfF^+ by photodissociation. *Journal of Molecular Spectroscopy*, 300:12–15, 2014.

[27] H. Loh, K. C. Cossel, M. C. Grau, **K.-K. Ni**, E. R. Meyer, J. L. Bohn, J. Ye, and E. A. Cornell. Precision spectroscopy of polarized molecules in an ion trap. *Science*, 342(6163):1220–1222, 2013.

[28] **K.-K. Ni**, R. Norte, D. J. Wilson, J. D. Hood, D. E. Chang, O. Painter, and H. J. Kimble. Enhancement of Mechanical Q Factors by Optical Trapping. *Physical Review Letters*, 108(21):214302, May 2012.

[29] D. E. Chang, **K.-K. Ni**, O. Painter, and H. J. Kimble. Ultrahigh-Q mechanical oscillators through optical trapping. *New Journal of Physics*, 14(4):045002, April 2012.

[30] Y. Zhao, D. J. Wilson, **K.-K. Ni**, and H. J. Kimble. Suppression of extraneous thermal noise in cavity optomechanics. *Optics Express*, 20:3586, February 2012.

[31] D. Wang, B. Neyenhuis, M. H. G. de Miranda, **K.-K. Ni**, S. Ospelkaus, D. S. Jin, and J. Ye. Direct absorption imaging of ultracold polar molecules. *Physical Review A*, 81(6):061404, June 2010.

[32] **K.-K. Ni**, S. Ospelkaus, D. Wang, G. Quéméner, B. Neyenhuis, M. H. G. de Miranda, J. L. Bohn, J. Ye, and D. S. Jin. Dipolar collisions of polar molecules in the quantum regime. *Nature*, 464:1324–1328, April 2010.

[33] S. Ospelkaus, **K.-K. Ni**, D. Wang, M. H. G. de Miranda, B. Neyenhuis, G. Quéméner, P. S. Julienne, J. L. Bohn, D. S. Jin, and J. Ye. Quantum-State Controlled Chemical Reactions of Ultracold Potassium-Rubidium Molecules. *Science*, 327:853, February 2010.

[34] S. Ospelkaus, **K.-K. Ni**, G. Quéméner, B. Neyenhuis, D. Wang, M. H. G. de Miranda, J. L. Bohn, J. Ye, and D. S. Jin. Controlling the Hyperfine State of Rovibronic Ground-State Polar Molecules. *Physical Review Letters*, 104(3):030402, January 2010.

[35] S. Ospelkaus, **K.-K. Ni**, M. H. G. de Miranda, B. Neyenhuis, D. Wang, S. Kotochigova, P. S. Julienne, D. S. Jin, and J. Ye. Ultracold polar molecules near quantum degeneracy. *Faraday Discussions*, 142:351, 2009.

[36] **K.-K. Ni**, S. Ospelkaus, D. J. Nesbitt, J. Ye, and D. S. Jin. A dipolar gas of ultracold molecules. *Physical Chemistry Chemical Physics*, 11:9626, 2009.

[37] **K.-K. Ni**, S. Ospelkaus, M. H. G. de Miranda, A. Pe'er, B. Neyenhuis, J. J. Zirbel, S. Kotochigova, P. S. Julienne, D. S. Jin, and J. Ye. A High Phase-Space-Density Gas of Polar Molecules. *Science*, 322:231, October 2008.

[38] S. Ospelkaus, A. Pe'er, **K.-K. Ni**, J. J. Zirbel, B. Neyenhuis, S. Kotochigova, P. S. Julienne, J. Ye, and D. S. Jin. Efficient state transfer in an ultracold dense gas of heteronuclear molecules. *Nat. Phys.*, 4(8):622–626, 2008.

[39] J. J. Zirbel, **K.-K. Ni**, S. Ospelkaus, T. L. Nicholson, M. L. Olsen, P. S. Julienne, C. E. Wieman, J. Ye, and D. S. Jin. Heteronuclear molecules in an optical dipole trap. *Physical Review A*, 78(1):013416, July 2008.

[40] J. J. Zirbel, **K.-K. Ni**, S. Ospelkaus, J. P. D'Incao, C. E. Wieman, J. Ye, and D. S. Jin. Collisional Stability of Fermionic Feshbach Molecules. *Physical Review Letters*, 100(14):143201, April 2008.

[41] D.K. Wood, **K.-K. Ni**, D.R. Schmidt, and A.N. Cleland. Submicron giant magnetoresistive sensors for biological applications. *Sensors and Actuators A: Physical*, 120(1):1 – 6, 2005.

† Principal Investigator

MENTORING

Postdoctoral Fellows:

Dr. Matthew Nichols (2019 - Present), Dr. Fang Fang (2020 - present), Dr. YiXiang Liu (2020 - present)

Dr. William Cairncross (2019 - 2021). Next position: Senior Quantum Engineer at Atom Computing

Dr. Ming-Guang Hu (2016 - 2021). Next position: Senior Research Scientist at QuEra Computing

Dr. Jonathan Hood (2016 - 2019). Next position: Assistant Professor at Department of Chemistry and Department of Physics and Astronomy at Purdue University

Dr. Yen-Wei Lin (2017 - 2019). Next position: Optical system engineer at Intelon Optics

Dr. David D. Grimes (2017 - 2019), Harvard-Max Planck Quantum Optics Center Prized Postdoctoral Fellow. Next position: Instructor and Digital Learning Lab Fellow at the Department of Chemistry at MIT

Dr. Nicholas R. Hutzler (2014 - 2017), Harvard Quantum Optics Center Prized Postdoctoral Fellow. Next position: Assistant Professor at the Department of Physics at Caltech

Dr. Alexandros Gerakis (2014). Next position: Associate Research Physicist at Princeton University

Graduate Students:

Jessie T. Zhang (2015 - present), Kenneth Wang (2017 - present), Lewis Picard (2018 - present), Lingbang Zhu (2019 - present), Yu Wang (2020 - present), Ryan Cimmino (2021 - present), Gabriel Patenotte (2021 - present), Conner Williams (2021 - present)

Yichao Yu (2014 - 2021), PhD in Physics. Next position: Postdoctoral Fellow at Duke University.

Yu Liu (2014 - 2020), PhD in Physics. Next position: Postdoctoral Fellow at the National Institute of Standards and Technology, Boulder, Colorado.

Lee R. Liu (2014 - 2019), PhD in Physics. Next position: Postdoctoral Fellow at JILA, NIST and the University of Colorado.

Undergraduate Students:

Kristina Wolinski (2021 - present), Sirina Prasad (2021 - present), Brayant Garcia (2021 - present), Avery Parr (2020 - present), Ilona Demler (2019 - 2020), Camilo Castellanos Sanchez (2019 - 2020, Next: graduate student at University of Toronto), Jonathan Chu (2019), Urshella Hishaam (2018), William Fu (2018), Jaden Freeze (2018) Constantin Arnscheidt (2017 - 2018, current: graduate student at MIT), Eugene O'friel (2015), William Tobias (2014 - 2016, current: graduate student at University of Colorado/JILA), Saahil Mehta (2014 - 2015), Jason Rosenberg (2015 - 2017, current: graduate student at Princeton)

Visiting Students:

Richard Karl (2020), Yu Wang (2019), Lingbang Zhu (2018), Remy Vatre (2017 - 2018), Frederic Condin (2016 - 2017), Colin MacGinnitie (2016), Enes Aybar (2014)

High School Students:

Sara Manning (summer 2019, Current position: undergraduate student at Harvard, 2020-2024)

Ilona Demler (summer 2016, Current position: undergraduate student at Harvard, 2018-2022)

INVITED TALKS, 3 upcoming and 38 completed post 2013

(upcoming, virtual) Northwestern University, Physics and Astronomy colloquium, April 30, 2021

(upcoming, virtual) Harvard University, Physics Colloquium, March 29, 2021

(upcoming, virtual) APS March Meeting, March 16, 2021

(virtual) PSW Science Lecture, December 12, 2020, https://www.youtube.com/watch?v=jtpc6fLhe5M, 273 view as of Feb 27, 2021

(virtual) Durham University, UK, Quantum Light Matter Seminar, December 2, 2020

(virtual) Virtual AMO seminar, November 13, 2020, https://www.youtube.com/watch?v=zRbh0HxXmckt=12s, 641 view as of February 27, 2021.

(virtual) University of Wisconsin, Madison, Physical Chemistry Seminar, November 3, 2020

(virtual) Yale University, Physical Chemistry Seminar, October 27, 2020

(virtual) Quantum 2020 Virtual Conference, October 19-22, 2020

(virtual) University of Colorado, Boulder, Physical Chemistry Seminar, October 9, 2020

(virtual) Columbia University, Physics Colloquium, October 5, 2020

(virtual) DAMOP Virtual Meeting 2020, "Probing ultracold reaction with ion spectrometry," June 2-5, 2020

(virtual) DAMOP Virtual Meeting 2020, Graduate Student Symposium, "Quantum Sciences with Ultracold Molecules," June 1, 2020

(virtual) Quantum Science Seminar 6, May 21, 2020, https://www.youtube.com/watch?v=OLNFTlh0rdU, 1540 views as of February 27, 2021

(8 Cancelled) Les Houches school on cold molecules, October 2020; Cold Controlled Molecules and Ions Conference, September 2020; Boulder summer school, July 2020; Gordon Research Conference: Molecular Interaction and Dynamics, June 2020; Munich Center for Quantum Science and Technology (MCQST) colloquium, May 19, 2020; Univ of Chicago physics colloquium, April 2, 2020; Northwestern University Physics and Astronomy colloquium, April 3, 2020; APS March Meeting 2020

Massachusetts Institute of Technology, Modern Optics and Spectroscopy seminar, “Ultracold Chemical reactions with molecules in slow motion”, Cambridge, MA, December 10, 2019

BEC 2019, "Interactions and Molecular Assembly of Ground State Cooled Single Atoms," Sant Feliu, Spain, September 7-13, 2019

Otto Stern Fest, " Ultracold Chemical Reactions with Molecules in Slow Motion," Frankfurt, Germany, September 1-5, 2019

Cold Atom Molecule Interactions, "Direct Observation of Ultracold Bimolecular Reactions," Paris, France, July 22-23, 2019

Dynamics of Molecular Collisions XXVII, "Direct Observation of Ultracold Bimolecular Reactions," Big Sky, MT, July 7-12, 2019

DAMOP 2019, "I.I. Rabi Prize in Atomic, Molecular, and Optical Physics talk: Bringing together Chemistry and Physics with Ultracold Polar Molecules," Milwaukee, WI, May 27-31, 2019

California Institute of Technology, Physics Colloquium, "Building Single Molecules - reactions, collisions, and spectroscopy of two atoms", April 18, 2019

OSA Biophotonics Congress: Optics in the Life Sciences, "Building single molecules atom-by-atom in optical tweezers", Tucson, Arizona, April 15-17, 2019

Boston University, Physical Chemistry seminar, "Ultracold Molecules for Chemistry and Physics", February 6, 2019

Rice University, Atomic, Molecular, Optical physics seminar, "Ultracold Molecules for Chemistry and Physics", January 31, 2019

MIT-Harvard Center for Ultracold Atoms, seminar, "Ultracold Molecules for Chemistry and Physics", December 11, 2018

University of Toledo, Physics Colloquium, "Ultracold Molecules for Chemistry and Physics", October 18, 2018

University of California, Berkeley, Physical Chemistry seminar, "Ultracold Molecules for Chemistry and Physics", October 16, 2018

Jin Fest: A Celebration of Deborah Jin’s Scientific Career, “Building single molecules,” Boulder, CO, September 7-8, 2018

Stereodynamics 2018 Conference, “Building single molecules - collisions and reactions of two atoms,” Arosa, Switzerland, September 2-7, 2018

The 26th International Conference on Atomic Physics, “Building single molecules,” Barcelona, Spain, July 22-27, 2018

Cold Controlled Molecules and Ions Conference, "Building single molecules," Athens, GA, March 25 - 30, 2018

Max Planck Harvard Quantum Optics Center Inauguration Ceremony, "Fun with two atoms: a tale of collisions and reactions," Munich, Germany, January 11-12, 2018

WE-Heraeus-Seminar: Longrange interactions, "Photoassociation of single atoms," Bad Honnef, Germany, October 25-27, 2017

DAMOP 2017, "Making a molecular gas in the quantum regime," Sacramento, CA, June 5-9, 2017

University of California, Berkeley, Atomic, Molecular, Optical physics seminar, "Ultracold Molecular Assembler", April 12, 2017

ACS National Meeting, Symposium on "Physical Chemistry meets AMO," "Ultracold Molecular Assembler", August 21, 2016

University of California, Los Angeles, Physical Chemistry seminar, "Molecules and reactions at micro-Kelvin temperature," April 11, 2016

University of Waterloo, Canada, Physics Colloquium, "Molecular physics and chemistry at micro-Kelvin temperature," April 21, 2016

Northwestern University, Atomic, Molecular, Optical physics seminar, "Ultracold Molecular Assembler," May 10, 2016

Amherst College, Physics Colloquium, "Molecular physics and chemistry at micro-Kelvin temperature," March 22 2016

International Organization of Chinese Physicists and Astronomers 8th Conference, "Precision Spectroscopy of Polarized Molecules in an Ion Trap," Singapore, June 2014

2013 and Prior

Cornell University, “New prospect for cold molecular physics," Ithaca, NY, April 4th, 2013

Duke University, “New prospect for cold molecular physics,” March 6th, 2013

Columbia University, “New prospect for cold molecular physics,” New York, NY, March 5th, 2013

Hong Kong University of Science and Technology, “New prospect for cold molecular physics,” Hong Kong, February 28th.

University of Illinois at Urbana-Champaign, “New prospect for cold molecular physics", February 18, 2013

Harvard University, “New prospect for cold molecular chemistry and physics," Cambridge, MA, February 13, 2013

Joint Quantum Institute, “New prospect for cold molecular physics," College Park, MD, February 11, 2013

Cornell University, “New prospect for cold molecular physics," Ithaca, NY, February 5, 2013

Institute of Atomic and Molecular Sciences, “New prospect for cold molecular physics," Taipei, Taiwan, January 23, 2013

National Tsing Hua University, “New prospect for cold molecular physics," Hsinchu, Taiwan, January 21, 2013

Pennsylvania State University, “New prospect for cold molecular physics," State College, PA, January 15, 2013

Princeton University, “New prospect for cold molecular physics,” Princeton, NJ, December 13, 2012

Institute for Advanced Study, Tsinghua University, Beijing, “Looking for electron out-of-roundness below 10^{-28} centimeters”, September 6, 2012

UC Berkeley AMO Seminar, “Optical Trapping of Dielectric Membranes," Berkeley, CA, April 13, 2011

DAMOP 2010, Thesis Prize Finalist presentation, Houston, TX, May 26, 2010

Quantum Optics Conference 2010, “Ultracold Collisions of Polar Molecules," Obergurgl, Austria, Feb., 2010

Center for Ultracold Atoms Seminar 2009, “Ultracold Collisions of Polar Molecules," Cambridge, MA, Nov. 17, 2009

DAMOP 2009, “Ultracold Molecules” session, Charlottesville, VA, May 22, 2009

Workshop on “Ultracold atoms and molecules,” Hsinchu, Taiwan, March 28 and 29, 2009

Extreme Photonics, “Ultrafast meets Ultracold” Conference, Gamagori, Japan, Nov. 12, 2008