
Xia Hong

Department of Physics and Astronomy

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Education

Ph.D.	Engineering and Applied Science, Yale University Advisor: Charles Ahn	2006
B.S.	Electronics, Peking University	1998

Professional Preparation and Appointment

Associate Professor	Physics and Astronomy, University of Nebraska-Lincoln	08/2016-present
Assistant Professor	Physics and Astronomy, University of Nebraska-Lincoln	01/2011-08/2016
Postdoctoral Associate	Physics, The Pennsylvania State University Advisor: Jun Zhu	09/2006-12/2010

Fellowships and Awards

- *DOE Early Career Award* (2016)
- *NCMN Ambassador Award*, Nebraska Center for Materials and Nanoscience, University of Nebraska-Lincoln (2015)
- *Achievement Award for Outstanding Service in Educational Outreach*, Nebraska Center for Materials and Nanoscience, University of Nebraska-Lincoln (2014)
- *NSF Career Award* (2012)
- *Research Development Fellow*, University of Nebraska-Lincoln (2011)
- *Nebraska EPSCoR First Award* (2011)
- *Albert P. Gagnebin Fellowship*, Yale University (1999)
- *Graduate School Fellowship; Faculty of Engineering Fellowship*, Yale University (1998)
- *Outstanding Graduate Award*, City of Beijing (1998)
- *Outstanding Graduate Award*, Peking University (1998)

Research Interests

- Transport phenomena in nanoscale and two dimensional systems, including strongly correlated oxides and layered van der Waals materials
- Epitaxial growth of complex oxide thin films and heterostructures using physical vapor deposition techniques
- Nanostructure fabrication
- Scanning probe microscopy studies of nanoscale ferroic materials

Professional Activities

- Panelist: NSF (ECCS 2012, CMP 2013, 2016, 2018, 2020), Nebraska EPSCoR (First Award 2012); *ad hoc* reviewer: NSF (CMP 2013, 2014, 2020), DOE (BES 2018 and 2019, Office of Science Graduate Fellowship 2012 and 2019), ACS (Petroleum Research Fund 2015, 2016)
- Sandia National Lab CINT External Proposal Review Committee (2018, 2019)
- Journal reviews for over 30 journals, including *Physical Review Letters*, *Applied Physics Letters*, *Science*, *Nature Materials*, *Nature Electronics*, *Nature Communications*, *Nano Letters*, *ACS Nano*, *Advanced Materials*, etc.
- Editorial board: *Scientific Reports*
- Session chairs: *APS March meetings* (2009, 2010, 2014-2016, 2019); *ACerS Electronic Materials and Applications conference* (2017, 2018); *MMM Conference* (2017); *Conference for Undergraduate Women in Physical Sciences* (2011, 2013-2018); *MRS Spring Symposium* (2020)
- Co-organizer: 2021 *APS March Meeting* Focus Topic “2D Materials: Semiconductors”; 2020 *MRS Spring Symposium* Topic “Topological and Quantum Phenomena in Oxides and Oxide Heterostructures”; 2016 *APS March Meeting* Focus Topic “Devices from 2D materials: function, fabrication and characterization”; sorter: 2009 and 2016 *APS March meeting*

Department and University Services

- Committee chair: *Physics Department Junior Faculty Search Committee* (2018-2019)
- Committee member: *Physics Department Junior Faculty Search Committee* (2012, 2016); *Graduate Admission Committee* (2014-present); *NCMN Graduate Research Fellowship Committee* (2015); *Physics Department Undergraduate advisory Committee* (2017-present); *Physics Department Faculty Advisory Committee* (2015, 2018-present); *NCMN Advisory Committee* (2017-present); *UNL Association for Women In Science Steering Committee* (2018-present)
- *UNL GSA Graduate Travel Award* reviewer (2017, 2018)

Teaching

- PHYS 212H *General Physics II: E&M (Honor)* (Fall 2011, Spring 2012, Fall 2012, Fall 2013, Fall 2017)
- PHYS 212 *General Physics II: E&M (Regular)* (Spring 2013, Fall 2015)
- PHYS/EECS 422/822 *Introduction to Physics and Chemistry in Solids* (Spring 2014, Spring 2016, Spring 2017)
- PHYS 213 *General Physics III: Modern Physics* (Fall 2014, Spring 2015)
- PHYS 927 *Introduction to Solid State Physics* (Fall 2016, Fall 2018, Fall 2020)
- PHYS 461 *Quantum Mechanics I* (Spring 2018, Spring 2019, Spring 2020)

Publications

Preprints or in Preparation

1. Wenjuan Zhu and Xia Hong, “Empowering 2D Nanoelectronics via Ferroelectricity”, *submitted* (2020).
2. Jingfeng Song, Yubo Qi, Zhiyong Xiao, Seung-Hyun Kim, Angus. I. Kingon, Andrew M. Rappe, and Xia Hong*, “Domain Wall Enabled Hysteresis-Free Steep Slope Switching in MoS₂ Transistors”, *arXiv: 1909.00113*, under review in *Nature Electronics* (2020).

Journals

3. Yuewei Yin, Xuanyuan Jiang, M. A. Koton, J. E. Shield, Xuegang Chen, Yu Yun, Alpha T. N'Diaye, Xia Hong, and Xiaoshan Xu, "Spin Rectification and Electrically Controlled Spin Transport in Molecular-Ferroelectrics-Based Spin Valves", *Physical Review Applied* **13**, 064011 (2020).
4. L. Zhang, X. Jiang, X. Xu, and X. Hong^{*}, "Abrupt enhancement of spin-orbit scattering time in ultrathin semimetallic SrIrO₃ close to the metal-insulator transition", *APL Materials* **8**, 051108 (2020).
5. Prescott E. Evans, Takashi Komesu, Le Zhang, Ding-Fu Shao, Andrew J. Yost, Shiv Kumar, Eike F. Schwier, Kenya Shimada, Evgeny Tsymbal, Xia Hong, and P. A. Dowben, "Detection of decoupled surface and bulk states in epitaxial orthorhombic SrIrO₃ thin films", *AIP Advances* **10**, 045027 (2020).
6. Dawei Li, Xi Huang, Zhiyong Xiao, Hanying Chen, Le Zhang, Yifei Hao, Jingfeng Song, Ding-Fu Shao, Evgeny Y. Tsymbal, Yongfeng Lu, and Xia Hong^{*}, "Polar Coupling Enabled Nonlinear Optical Filtering at MoS₂/Ferroelectric Heterointerfaces", *Nature Communications* **11**, 1422 (2020).
7. Bo Chen, Jingfeng Song, Xuezheng Dai, Ye Liu, Peter N Rudd, Xia Hong, and Jinsong Huang, "Synergistic Effect of Elevated Device Temperature and Excess Charge Carriers on the Rapid Light-Induced Degradation of Perovskite Solar Cells", *Adv. Mater.* **31**, 1902413 (2019).
8. D. Li, C. Wei, J. Song, X. Huang, F. Wang, K. Liu, W. Xiong, X. Hong, B. Cui, A. Feng, L. Jiang, Y. Lu, "Anisotropic Enhancement of Second-Harmonic Generation in Monolayer and Bilayer MoS₂ by Integrating with TiO₂ Nanowires", *Nano Lett.* **19**, 4195 (2019).
9. A. Rajapitamahuni, L. L. Tao, Y. Hao, J. Song, X. Xu, E. Y. Tsymbal, and X. Hong^{*}, "Ferroelectric Polarization Control of Magnetic Anisotropy in PbZr_{0.2}Ti_{0.8}O₃/La_{0.8}Sr_{0.2}MnO₃ Heterostructures", *Phys. Rev. Mater.* **3**, 021401(R) (2019).
10. Xuegang Chen, Xiaozhe Zhang, Myung-Geun Han, Le Zhang, Yimei Zhu, Xiaoshan Xu, and Xia Hong^{*}, "Magnetotransport Anomaly in Room Temperature Ferrimagnetic NiCo₂O₄ Thin Films", *Adv. Mater.* **31**, 1805260 (2019).
11. Jingfeng Song, Z. Xiao, B. Chen, S. Prockish, X. Chen, Stephen J. Huang, and X. Hong^{*}, "Enhanced Piezoelectric Response in Hybrid Lead Halide Perovskite Thin Films via Interfacing with Ferroelectric PbZr_{0.2}Ti_{0.8}O₃", *ACS Appl. Mater. Interfaces* **10**, 19218 (2018).
12. Dawei Li, Zhiyong Xiao, Sai Mu, Fei Wang, Ying Liu, Jingfeng Song, Xi Huang, Lijia Jiang, Jun Xiao, Lei Liu, Stephen Ducharme, Bai Cui, Xia Hong, Lan Jiang, Jean-Francois Silvain, Yongfeng Lu, "A Facile Space-Confined Solid-Phase Sulfurization Strategy for Growth of High-Quality Ultrathin Molybdenum Disulfide Single Crystals", *Nano Lett.* **18**, 2021 (2018).
13. Peter A. Dowben, Christian Binek, Kai Zhang, Lu Wang, Wai-Ning Mei, J. P. Bird, U. Singisetti, Xia Hong, Kang L. Wang, and Dmitri Nikonov, "Towards a Strong Spin-Orbit Coupling Magnetoelectric Transistor", *IEEE Journal of Exploratory Solid-State Computational Devices and Circuits* **4**, 1-9 (2018).
14. Xin Zhang, Alpha T. N'Diaye, Xuanyuan Jiang, Xiaozhe Zhang, Yuewei Yin, Patrick Rosa, Xuegang Chen, Xia Hong, Xiaoshan Xu, and Peter A. Dowben, "Indications of magnetic coupling effects in spin cross-over molecular thin films", *Chem. Commun.* **54**, 944 (2018).
15. Shi Cao, Zhiyong Xiao, Chun-Pui Kwan, Kai Zhang, Jonathan P. Bird, Lu Wang, W.N. Mei, Xia Hong, Peter A. Dowben, "Moving towards the Magnetoelectric Graphene Transistor", *Appl. Phys. Lett.* **111**, 182402 (2017).
16. Reza M Moghadam, Zhiyong Xiao, Kamyar Ahmadi-Majlan, Everett D Grimley, Mark Bowden, Phuong-Vu Ong, Scott A Chambers, James M Lebeau, Xia Hong, Peter V Sushko, Joseph H Ngai, "An

- Ultrathin Single Crystalline Relaxor Ferroelectric Integrated on a High Mobility Semiconductor”, *Nano Lett.* **17**, 6248-6257 (2017).
17. Xuegang Chen, Xin Zhang, Mark A. Koten, Hanghui Chen, Zhiyong Xiao, Le Zhang, Jeffrey E. Shield, Peter A. Dowben and Xia Hong*, “Interfacial Charge Engineering in Ferroelectric-Controlled Mott Transistors”, *Adv. Mater.* **29**, 1701385 (2017).
 18. D.W. Li, Q.M. Zou, H. Rabiee Golgir, K. Keramatnejad, X. Huang, J.F. Song, Z.Y. Xiao, X. Hong, L. Jiang, J.F. Silvain, and Y.F. Lu, “Controlled Defect Creation and Removal in Graphene and MoS₂ Monolayers”, *Nanoscale* **9**, 8997 (2017).
 19. Zhiyong Xiao, Jingfeng Song, David K. Ferry, Stephen Ducharme, Xia Hong*, “Ferroelectric Domain Patterning Controlled Schottky Junction State in Monolayer MoS₂”, *Phys. Rev. Lett.* **118**, 236801 (2017).
 20. Dawei Li, Zhiyong Xiao, Hossein Rabiee Golgir, Li Jia Jiang, Vijay Raj Singh, Kamran Keramatnejad, Kevin E. Smith, Xia Hong, Lan Jiang, Jean-Francois Silvain, and Yongfeng Lu, “Large-Area 2D/3D MoS₂-MoO₂ Heterostructures with Thermally Stable Exciton and Intriguing Electrical Transport Behaviors”, *Advanced Electronic Materials* **3**, 1600335 (2017).
 21. Haidong Lu, Bo Wang, Tao Li, Alexey Lipatov, Hyungwoo Lee, Anil Rajapitamahuni, Ruijuan Xu, Xia Hong, Saeedeh Farokhipoor, Lane W. Martin, Chang-Beom Eom, Long-Qing Chen, Alexander Sinitskii, and Alexei Gruverman, “Nanodomain Engineering in Ferroelectric Capacitors with Graphene Electrodes”, *Nano Lett.*, **16**, 6460–6466 (2016).
 22. A. Rajapitamahuni, L. Zhang, M. A. Koten, V. R. Singh, J. D. Burton, E. Y. Tsymbal, J. E. Shield, and X. Hong*, “Giant Enhancement of Magnetic Anisotropy in Ultrathin CMR Films via Nanoscale 1D Periodic Depth Modulation”, *Phys. Rev. Lett.* **116**, 187201 (2016).
 23. Xia Hong*, “Emerging ferroelectric transistors with nanoscale channel materials: the possibilities, the limitations”, *J. Phys.: Condens. Matter* (Topical Review) **28**, 103003 (2016).
 24. L. Zhang, X. G. Chen, H. J. Gardner, M. A. Koten, J. E. Shield, and X. Hong*, “Effect of Strain on Ferroelectric Field Effect in Strongly Correlated Oxide Sm_{0.5}Nd_{0.5}NiO₃”, *Appl. Phys. Lett.* **107**, 152906 (2015).
 25. L. Zhang, H. J. Gardner, X. G. Chen, V. R. Singh, and X. Hong*, “Strain Induced Modulation of the Correlated Transport in Epitaxial Sm_{0.5}Nd_{0.5}NiO₃ Thin Films”, *J. Phys.: Condens. Matter (Fast Track Communication)* **27**, 132201 (2015). (*IOP Select, featured in the Lab Talk of JPCM, Apr. 29, 2015*)
 26. Z. Xiao, J. Hamblin, S. Poddar, S. Ducharme, P. Paruch, and X. Hong*, “Effect of Thermal Annealing on Ferroelectric Domain Structures in Poly(vinylidene-fluoride-trifluorethylene) Langmuir-Blodgett Thin Films”, *J. Appl. Phys.* **116**, 066819 (2014).
 27. V. Singh, L. Zhang, A. K. Rajapitamahuni, N. Devries, and X. Hong*, “Nonlinear transport in nanoscale phase separated colossal magnetoresistive oxide thin films”, *J. Appl. Phys.* **116**, 033914 (2014).
 28. Z. Xiao, S. Poddar, S. Ducharme, and X. Hong*, “Domain wall roughness and creep in nanoscale crystalline ferroelectric polymers”, *Appl. Phys. Lett.* **103**, 112903 (2013).
 29. A. Rajapitamahuni, Jason Hoffman, Charles Ahn, and X. Hong*, “Examining Graphene Field Effect Sensors for Ferroelectric Thin Film Studies”, *Nano Lett.* **13**, 4374 (2013).
 30. X. Hong*, K. Zou, A. M. DaSilva, C. H. Ahn, and J. Zhu, “Integrating functional oxides with graphene”, *Solid State Commun.* **152**, 1365 (2012).
 31. P. Paruch, A. B. Kolton, X. Hong, C. H. Ahn, and T. Giamarchi, “Thermal quench effects on ferroelectric domain walls”, *Phys. Rev. B* **85**, 214115 (2012).

32. X. Hong, K. Zou, B. Wang, S.-H. Cheng, and J. Zhu, “Evidence for spin-flip scattering and local moments in dilute fluorinated graphene”, *Phys. Rev. Lett.* **108**, 226602 (2012).
33. K. Zou, X. Hong, and J. Zhu, “Electron-electron interaction and electron-hole asymmetry in bilayer graphene”, *Phys. Rev. B* **84**, 085408 (2011).
34. J. Hoffman, X. Hong, and C.H. Ahn, “Device performance of ferroelectric/correlated oxide heterostructures for non-volatile memory applications”, *Nanotechnology* **22**, 254014 (2011).
35. X. Hong, S.-H. Cheng, C. Herding, and J. Zhu, “Colossal negative magnetoresistance in dilute fluorinated graphene”, *Phys. Rev. B* **83**, 085410 (2011).
36. K. Zou, X. Hong, D. Keefer, and J. Zhu, “Deposition of high-quality HfO₂ on graphene and the effect of remote substrate phonon scattering”, *Phys. Rev. Lett.* **105**, 126601 (2010).
37. X. Hong, J. Hoffman, A. Posadas, K. Zou, C.H. Ahn, and J. Zhu “Unusual resistance hysteresis in *n*-layer graphene field effect transistors fabricated on ferroelectric Pb(Zr_{0.2}Ti_{0.8})O₃”, *Appl. Phys. Lett.* **97**, 033114 (2010).
38. X. Hong, K. Zou, and J. Zhu, “Quantum scattering time and its implications on scattering sources in graphene”, *Phys. Rev. B* **80**, 241415 (*Rapid Communication*) (2009). Appeared in *Virtual Journal of Nanoscale Science & Technology* (Jan. 18, 2010 issue) and *Virtual Journal of Ultrafast Science* (Jan. 2010 issue).
39. N. Naftalis, Y. Bason, J. Hoffman, X. Hong, C. H. Ahn, and L. Klein, "Anisotropic magnetoresistance and planar Hall effect in epitaxial films of La_{0.7}Ca_{0.3}MnO₃", *J. Appl. Phys.* **106**, 023916 (2009).
40. X. Hong, A. Posadas, K. Zou, C. H. Ahn, and J. Zhu, “High-mobility few-layer graphene field effect transistors fabricated on epitaxial ferroelectric gate oxides”, *Phys. Rev. Lett.* **102**, 136808 (2009).
41. J.-B. Yau, X. Hong, A. Posadas, W. Gao, E. Altman, C. H. Ahn, Y. Bason, L. Klein, M. Sidorov, and Z. Krivokapic, “Anisotropic magnetoresistance in colossal magnetoresistive La_{1-x}Sr_xMnO₃ thin films”, *J. Appl. Phys.* **102**, 103901 (2007).
42. Y. Bason, L. Klein, H. Q. Wang, J. Hoffman, X. Hong, V. E. Henrich, and C. H. Ahn, “Planar Hall effect in epitaxial thin films of magnetite”, *J. Appl. Phys.* **101**, 09J507 (2007).
43. X. Hong, J.-B. Yau, J. D. Hoffman, C. H. Ahn, Y. Bason, and L. Klein, “Effect of electric field doping on the anisotropic magnetoresistance of doped manganites”, *Phys. Rev. B* **74**, 174406 (2006).
44. Y. Bason, L. Klein, J.-B. Yau, X. Hong, J. D. Hoffman, and C. H. Ahn, “Planar Hall effect magnetic random access memory”, *J. Appl. Phys.* **99**, 08R701 (2006).
45. T. C. Kaspar, T. Droubay, V. Shutthanandan, S. M. Heald, C. M. Wang, D. E. McCready, S. Thevuthasan, J. D. Bryan, D. R. Gamelin, A. J. Kellock, M. F. Toney, X. Hong, C. H. Ahn, and S. A. Chambers, “Ferromagnetism and structure of epitaxial Cr-doped anatase TiO₂ thin films”, *Phys. Rev. B* **73**, 155327 (2006).
46. X. Hong, A. Posadas, and C. H. Ahn, “Examining the screening limit of field effect devices via the metal-insulator transition”, *Appl. Phys. Lett.* **86**, 142501 (2005).
47. X. Hong, F. Xiao, J. W. Reiner, A. Posadas, and C. H. Ahn, “Growth and characterization of La_{0.8}Sr_{0.2}MnO₃/Pb(Zr_{0.2}Ti_{0.8})O₃/La_{0.8}Sr_{0.2}MnO₃ heterostructures for three-dimensional circuit studies”, *Ann. Phys.* **13**, 15 (2004).
48. Y. Bason, L. Klein, J.-B. Yau, X. Hong, and C. H. Ahn, “Giant planar Hall effect in colossal magnetoresistive La_{0.84}Sr_{0.16}MnO₃ thin films”, *Appl. Phys. Lett.* **84**, 2593 (2004).
49. X. Hong, A. Posadas, A. Lin, and C. H. Ahn, “Ferroelectric-field-induced tuning of magnetism in the colossal magnetoresistive oxide La_{1-x}Sr_xMnO₃”, *Phys. Rev. B* **68**, 134415 (2003).

50. A. Lin, X. Hong, V. Wood, A. A. Verevkin, C. H. Ahn, R. A. McKee, F. J. Walker, and E. D. Specht, “Epitaxial growth of $\text{Pb}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_3$ on Si and its nanoscale piezoelectric properties”, *Appl. Phys. Lett.* **78**, 2034 (2001).

Conference Proceedings

51. Le Zhang, Anil Rajapitamahuni, Yifei Hao, Xia Hong^{*}, “Probing magnetic anisotropy in epitaxial $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ thin films and nanostructures via planar Hall effect”, *Proc. SPIE 10732*, Spintronics XI, 107320F (20 September 2018), doi: 10.1117/12.2319249.
52. Y. Bason, L. Klein, J.B. Yau, X. Hong, C.H. Ahn, “Characterization of the magnetic anisotropy in thin films of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ using the planar Hall effect”, *Proceedings of Second Seeheim Conference on Magnetism, Physica Status Solidi (c)* **1**, 3336-3338 (2004).

Patent

Charles Ahn, Lior Klein, Yosef Bason, Xia Hong, Jeng-bang Yau, “Magneto-electronic devices based on colossal magnetoresistive thin films”. United States Patent 7684147.

Dmitri E. Nikonov, Christian Binek, Xia Hong, Jonathan P. Bird, Kang L. Wang, Peter W. Dowben, “Anti-Ferromagnetic Magneto-Electric Spin-Orbit Read Logic”. Patent Number: US 10,361,292 B2

Invited Talks, Seminars and Colloquia

<i>SRC LMD e-Workshop</i>	<i>Web Seminar</i>	Feb. 20, 2020
<i>Condensed Matter Seminar</i> , Physics Department, Temple University	Philadelphia, PA	Nov. 6, 2019
<i>Colloquium</i> , Department of Physics, University of Illinois at Chicago	Chicago, IL	Feb. 18, 2019
<i>Invited talk</i> , 4 th International Conference on 2D Materials and Technologies (ICON-2DMat 2018)	Melbourne, Australia	Dec. 12, 2018
<i>Complex Quantum Systems/Condensed Matter Seminar</i> , Department of Physics, University of Texas-Austin	Austin, TX	Sep. 20, 2018
<i>Invited talk</i> , 2018 SPIE Spintronics XI Conference	San Diego, CA	Aug. 19, 2018
<i>Seminar</i> , Institute of Physics, Chinese Academy of Sciences	Beijing, China	May 10, 2018
<i>Invited talk</i> , 2018 Conference on Electronic and Advanced Materials	New Orlando, FL	Jan. 18, 2018
<i>Condensed Matter Physics Seminar</i> , Department of Physics, Penn State University	University Park, PA	Oct. 18, 2017
<i>Condensed Matter Physics & Materials Science Seminar</i> , Brookhaven National Laboratory	Upton, NY	June 20, 2017
<i>Seminar</i> , SOEI Forum, School of Optical and Electronic Information, Huazhong University of Science and Technology	Wuhan, China	May 18, 2017
<i>Seminar</i> , Institute of Physics, New York University-Shanghai	Shanghai, China	May 10, 2017
<i>Invited talk</i> , 2016 Workshop on Innovative Nanoscale Devices and Systems (WINDS)	Kohala Coast, HI	Dec. 4, 2016
<i>ECE Colloquium</i> , Department of Electrical and Computer	Urbana, IL	Sep. 22, 2016

Engineering, University of Illinois at Urbana-Champaign

<i>Seminar</i> , School of Physics, Huazhong University of Science and Technology	Wuhan, China	May 11, 2016
<i>Seminar</i> , International Center for Quantum Materials, School of Physics, Peking University	Beijing, China	May 6, 2016
<i>Institute for Materials Science & Engineering Seminar</i> , Department of Physics, Washington University in St. Louis	St. Louis, MO	Apr. 29, 2016
<i>SRC NRI e-Workshop</i>	<i>Web Seminar</i>	Oct. 20, 2015
<i>Seminar</i> , IBM Watson Research Center	Yorktown, NY	July 15, 2015
<i>Colloquium</i> , Department of Physics, University of Northern Iowa	Cedar Falls, IA	Apr. 22, 2015
<i>Hard Condensed Matter and AMO Seminar</i> , School of Physics, Georgia Institute of Technology	Atlanta, GA	Mar. 26, 2015
<i>NST Seminar</i> , Center for Nanoscale Materials, Argonne National Laboratory	Argonne, IL	Nov. 12, 2014
<i>Invited advocate for “Mott Memory”, 2014 ITRS-ERD Emerging Memory Device Assessment Workshop</i>	Albuquerque, NM	Aug. 26, 2014
<i>Invited talk</i> , 3 rd World Congress of Advanced Materials	Chongqing, China	Jun. 8, 2014
<i>Invited guest speaker</i> , Electrical and Computer Engineering Honor Society, University of Nebraska-Lincoln	Lincoln, NE	Apr. 9, 2014
<i>Invited talk</i> , 57 th Midwest Solid State Conference	Lawrence, KS	Sep. 28, 2013
<i>Invited talk</i> , PSS Symposia on Quantum/Crystal, Graphene and New Particle Physics-2013	Boston, MA	Sep. 5, 2013
<i>Invited talk</i> , Crystal & Graphene Science Symposium-2012	Boston, MA	Sep. 6, 2012
<i>NCMN Seminar</i> , University of Nebraska-Lincoln	Lincoln, NE	Nov. 9, 2011
<i>Invited talk</i> , Conference for Undergraduate Women in Physics	Lincoln, NE	Oct. 21, 2011
<i>Invited talk</i> , Graphene Mini-Workshop	Lincoln, NE	Mar. 28, 2011
<i>Invited talk</i> , APS March Meeting	Dallas, TX	Mar. 24, 2011
<i>Colloquium</i> , Department of Physics, Missouri University of Science and Technology	Rolla, MO	Mar. 25, 2010
<i>Colloquium</i> , Department of Physics and Astronomy, University of Kentucky	Lexington, KY	Feb. 24, 2010
<i>Colloquium</i> , Department of Physics and Astronomy, University of Nebraska, Lincoln	Lincoln, NE	Feb. 18, 2010
<i>Colloquium</i> , Department of Physics, Lehigh University	Bethlehem, PA	Feb. 11, 2010
<i>Condensed Matter Seminar 290 K</i> , University of California, Berkeley	Berkeley, CA	Feb. 1, 2010
<i>Colloquium</i> , Physics Department, West Virginia University	Morgantown, WV	Jan. 21, 2010
<i>Colloquium</i> , Physics Department, Northeastern University	Boston, MA	Nov. 16, 2009

<i>Invited talk</i> , 21 st International Symposium on Integrated Ferroelectrics and Functionalities	Colorado Springs, CO	Sep. 29, 2009
<i>Seminar</i> , IBM Watson Research Center	Yorktown, NY	May 24, 2006
<i>CRISP Seminar</i> , MRSEC Center, Yale University	New Haven, CT	May, 2006
<i>Seminar</i> , Department of Physics, Penn State University	State College, PA	May 1, 2006
<i>Seminar</i> , Department of Physics, Rutgers University	Piscataway, NJ	Apr. 20, 2006
<i>Monday Evening Seminar</i> , Applied Physics, Yale University	New Haven, CT	Feb. 27, 2006
<i>SRC Seminar</i> , Advanced Micro Devices	Sunnyvale, CA	Oct. 3, 2005
<i>SRC Seminar</i> , Advanced Micro Devices	Sunnyvale, CA	Sep. 22, 2004
<i>Monday Evening Seminar</i> , Applied Physics, Yale University	New Haven, CT	Jan. 12, 2004

Research Advisees

Postdoc: Dawei Li

Graduate students: Hanying Chen, Yifei Hao, Kun Wang, Qiuchen Wu, Tianlin Li, Yuanyuan Zhang

Undergraduate students: Alyssa Simpson

Professional Affiliations

American Physical Society

American Ceramic Society

American Vacuum Society