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Education

Highest Earned Degree

Ph.D., Physics, **Princeton University**, Princeton, NJ, November 2004.

Dissertation

Magnetic Field Induced Commensurability and Correlation Effects in Low Dimensional Organic Conductors, November 2004. Adviser: Prof. Paul M. Chaikin.

Other Earned Degrees

M.S., Physics, **Northwestern University**, Evanston, IL, May 1999.

B.S., Physics, **University of Science and Technology of China (USTC)**, Hefei, P. R. China, July 1998.

Honors and Awards

Professional Awards and Honors

Alexander von Humboldt Research Fellowship for Experienced Researchers. (2012)
Worked in Prof. Dr. Matthias Bode's group at Universität Würzburg to investigate electronic and spin super-structures in correlated thin films and single crystals.

DOE Early Career Award, 2012

Research fellowship for experienced researchers, Alexander von Humboldt Foundation, 2011

NSF Faculty Early Career Award, 2009.

Outstanding Graduate Award, USTC, 1998.

Employment History

Positions Held

07/2013-ongoing	Associate Professor, Department of Physics & Astronomy, Rutgers.
07/2007-06/2013	*Assistant Professor*, Department of Physics & Astronomy, Rutgers.
07/2006-06/2007	*Assistant Research Professor*, Department of Physics & Astronomy, Rutgers.
09/2004-06/2006	*Post-doctor*, Department of Physics, University of Texas at Austin. Adviser: Prof. Alex de Lozanne
11/1999-08/2004	*Graduate Research Assistant*, Department of Physics, Princeton University.

Publications

Articles in Refereed Journals

Accepted or In Press

Wenhan Zhang, Damien West, Y. Qiu, Yew-san Hor, Shengbai Zhang and **Weida Wu**, "Electronic fingerprints of Cr and V dopants in topological insulator Sb_2Te_3", Phys. Rev. B, **Accepted** (2018).

Lorenzo Vistoli, Wenbo Wang, Anke Sander, Qiuxiang Zhu, Blai Casals, Rafael Cichelero, Agnès Barthélémy, Stéphane Fusil, Gervasi Herranz, Sergio Valencia, Radu Abrudan, Eugen Weschke, Kazuki Nakazawa, Hiroshi Kohno, Jacobo Santamaria, **Weida Wu**, Vincent Garcia and Manuel Bibes, "Giant topological Hall effect in electron-doped manganite thin films", Nature Physics, **in press** (2018).

Published

Stefan Wilfert, Paolo Sessi, Zhiwei Wang, Henrik Schmidt, M. Carmen Martinez-Velarte, Seng Huat Lee, Yew San Hor, Alexander F. Otte, Yoichi Ando, **Weida Wu**, and Matthias Bode, "Scanning tunneling spectroscopy investigations of superconducting-doped topological insulators: Experimental pitfalls and results", Phys. Rev. B, **98**, 085133 (2018).

Zaiyao Fei, Bevin Huang, Paul Malinowski, Wenbo Wang, Tiancheng Song, Joshua Sanchez, Wang Yao, Di Xiao, Xiaoyang Zhu, Andrew May, Weida Wu, David Cobden, Jiun-Haw Chu, Xiaodong Xu, "Two-Dimensional Itinerant Ising Ferromagnetism in Atomically thin Fe_3GeTe_2", Nat. Mater., **17**, 778 (2018).

Lin Miao, Yishuai Xu, Wenhan Zhang, Daniel Older, S. Alexander Breitweiser, Haowei He, Takehito Suzuki, Jonathan D. Denlinger, Rudro R. Biswas, Joseph Checkelsky, **Weida Wu**, L. Andrew Wray, "Observation of a Topological Insulator Dirac Cone Reshaped by Non-magnetic Impurity Resonance", npj Quantum Materials, **3,** 29 (2018).
http://dx.doi.org/10.1038/s41535-018-0101-8

Wenbo Wang, Yunbo Ou, Chang Liu, Yayu Wang, Ke He, Qi-kun Xue, and **Weida Wu**, "Direct evidence of ferromagnetism in a quantum anomalous Hall system", Nat. Phys., **14**, 791-795 (2018).
https://www.nature.com/articles/s41567-018-0149-1

Lu Zheng, Hui Dong, Xiaoyu Wu, Yen-Lin Huang, Wenbo Wang, **Weida Wu**, Zheng Wang, Keji Lai, "Interferometric Imaging of Nonlocal Electromechanical Power Transduction in Ferroelectric Domains", Proc. Nat. Acad. Sci. US, **AOP**, (2018).
http://www.pnas.org/content/early/2018/05/02/1722499115

Wenhan Zhang, M.X. Chen, Jixia Dai, Xueyun Wang, Zhicheng Zhong, S-W. Cheong, and **Weida Wu**, "Topological Phase Transition with Nanoscale Inhomogeneity in $(Bi_{1-x}In_x)_2Se_3$", Nano Letters, **18** (4)**,** 2677–2682 (2018).

Di Xiao, Jue Jiang, Jae-Ho Shin, Wenbo Wang, Fei Wang, Yi-Fan Zhao, Chaoxing Liu, **Weida Wu**, Moses H. W. Chan, Nitin Samarth, and Cui-Zu Chang, "The Realization of the Axion Insulator State in Quantum Anomalous Hall Sandwich Heterostructures", Phys. Rev. Lett., **120,** 056801 (2018)

Lu Chen, Fan Yu, Ziji Xiang, Tomoya Asaba, Colin Tinsman, Benjamin Lawson, Paul. M. Sass, **Weida Wu**, B. L. Kang, Xianhui Chen, and Lu Li, "Torque Diffrential Magnetometry with Qplus-Mode Quartz Tuning Fork", Phys. Rev. Applied **9**, 024005 (2018)

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Wenbo Wang, Julia A. Mundy, Charles M. Brooks, Jarrett A. Moyer, Megan E. Holtz, David A. Muller, Darrell G. Schlom, and **Weida Wu**, "Visualizing weak ferromagnetic domains in multiferroic hexagonal ferrite thin film", Phys. Rev. B, **95**, 134443 (2017).

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Matthew Brahlek, Nikesh Koirala, Maryam Salehi, Jisoo Moon, Wenhan Zhang, Haoxiang Li, Xiaoqing Zhou, Myung-Geun Han, Liang Wu, Thomas Emge, Hang-Dong Lee, Can Xu, Seuk Joo Rhee, Torgny Gustafsson, N. Peter Armitage, Yimei Zhu, Daniel S. Dessau, Weida Wu, and Seongshik Oh, "Disorder-driven topological phase transition in Bi_2Se_3 films", Phys. Rev. B **94**, 165104 (2016)

Wenbo Wang, Cui-Zu Chang, Jagadeesh S. Moodera, and Weida Wu, "Visualizing ferromagnetic domain behaviors of V-doped Sb_2Te_3 thin films", npj Quantum Materials, **1**, 16023 (2016)

Jixia Dai, Damien West, Xueyun Wang, Yazong Wang, Daniel Kwok, S.-W. Cheong, S.B. Zhang, and Weida Wu, "Toward the intrinsic limit topological insulator Bi_2Se_3", Phys. Rev. Lett., **117**, 106401 (2016).

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Jixia Dai, Kristjan Haule, J.J. Yang, Y.S. Oh, S-W. Cheong and **Weida Wu**, "Hierarchical stripe phases in $IrTe_2$ driven by competition between Ir dimerization and Te bonding", *Phys. Rev. B*, **90**, 235121, (2014).

Jixia Dai, Wenbo Wang, Matthew Brahlek, Nikesh Koirala, Maryam Salehi, Seongshik Oh and **Weida Wu**, "Restoring pristine Bi_2Se_3 surface with an effective Se decapping process", Nano Research, **8**, 1222-1228 (2014).
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Rama K. Vasudevan, Weida Wu, Jeffrey R. Guest, Arthur P. Baddorf, Anna N. Morozovska, Eugene A. Eliseev, Nina Balke, V. Nagarajan, Peter Maksymovych and Sergei V. Kalinin, "Domain Wall Conduction and Polarization-Mediated Transport in Ferroelectrics", (Feature Article), Adv. Funct. Mater., **23**, 2592–2616 (2013).
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Weida Wu, Y. Horibe, N. Lee, S.-W. Cheong, and J.R. Guest, "Conduction of Topologically Protected Charged Ferroelectric Domain Walls", Phys. Rev. Lett., **108**, 077203 (2012).
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Y.H. Sun, Y.G. Zhao, H.F. Tian, C.M. Xiong, B.T. Xie, M.H. Zhu, S. Park, **Weida Wu**, J.Q. Li, and Q. Li, "The electric and magnetic modulation of fully strained 'dead' layers in $La_{0.67}Sr_{0.33}MnO_3$ films.," *Phys. Rev. B*, **78**, 024412 (2008).
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B. T. Xie, Y. G. Zhao, C. M. Xiong, S. Park, and **Weida Wu**, "Current-voltage characteristics of phase separated $La_{0.5}Ca_{0.5}MnO_3$/Nb-$SrTiO_3$ *p-n* junction and magnetic tunability," *Appl. Phys. Lett.*, **92**, 232109 (2008).
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J. Shinagawa, **Weida Wu**, P. M. Chaikin, W. Kang, W. Yu, F. Zhang, Y. Kurosaki, C. Parker, S.E. Brown, "Se^{77} NMR studies on magic angle effect and nature of the superconducting state in the organic superconductors $(TMTSF)_2X$," *J. Low Temp. Phys.*, **142**, 227 (2006).

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Funding

Externally-Funded Research and/or Training Grants

09/2017-06/2020	(Grant Amount: $540,000) Magnetic imaging of topological quantum phenomena, Weida Wu, Agency: Department of Energy, Role: PI
10/2015-09/2019	(Grant Amount: $2,000,000) "EFRI 2-DARE: Engineering novel topological interface states in 2D chalcogenide heterostructures", NSF EFMA-1542798, PI: Weida Wu, co-PI: Sean Oh, N.P. Armitage and Shengbai Zhang, Agency: National Science Foundation, Role: Lead PI

06/2015-05/2019	(Grant Amount: $507,118) "Visualizing nanoscale phenomena in layered chalcogenides with heavy elements", NSF DMR-1506618, Weida Wu, Agency: National Science Foundation, Role: PI
07/2012-12/2017	(Grant Amount: $750,000) DOE Early Career Award, "*In situ* scanning force microscopy studies of cross-coupled domains and domain walls", Weida Wu, Agency: Department of Energy, Role: PI
03/2009-02/2014	(Grant Amount: $525,000) NSF CAREER Award, "CAREER: Nanoscale magnetic phenomena and coercivity mechanism in layered magnets with extremely large anisotropy", NSF-DMR-0844807,, Weida Wu, Agency: National Science Foundation, Role: PI