Ziliang Ye
Department of Physics & Astronomy
University of British Columbia
Phone: 1-604-827-2984
E-mail: zlye@phas.ubc.edu

Education

Ph.D., Applied Science and Technology, UC Berkeley — December 2013
Major: Applied Physics, Advisor: Xiang Zhang

B.S. in Physics, Fudan University, Shanghai, China — July 2008

Professional Experience

Stanford University, visiting scholar — May 2015 - present
Columbia University, postdoc fellow — October 2014 - present
Advisor: Tony F. Heinz

UC Berkeley, postdoc fellow — January 2014 - October 2014
Advisor: Xiang Zhang

Areas of Research

Two-dimensional materials, ultrafast optical spectroscopy, optical nearfield imaging, plasmonics and metamaterials

Honors and Awards

APS DMP Post-Doctoral Travel Award	2017
Kavli Energy NanoScience Institute Thesis Prize Award	2014
MRS Graduate Student Award Gold Medalist	2013
Chinese Government Award for Outstanding Student Aboard	2013
Anselmo John Macchi Fellowship, UC Berkeley	2011
Power Award, UC Berkeley	2009
Tsung-Dao Lee Fellowship, Fudan University	2007
National Student Scholarship, Fudan University	2005 - 2007

Summary of Scholarly Activity

18 peer reviewed papers
19 invited talks

Teaching and Mentoring

PHYS 159 Introductory Physics Laboratory for Engineers	Spring 2018
Mentored undergraduate and graduate students at UC Berkeley, Columbia, and Stanford universities	2012 - 2017
Fellow of Summer Institute for Preparing Future Faculty, UC Berkeley	2014

Referee Experience

Served as a referee for peer review journals such as *Science*, *Nature Physics*, *Nature Communications*, *PRL*, *PRX*, *PRB*, *PR Applied*, *Nano Letters*, *Advanced Materials*, *2D Materials*, etc.

Invited Presentations

1. AVS International Symposium
   Tampa, FL — November 2017
2. University of British Columbia, Department of Physics and Astronomy
   Vancouver, BC — April 2017
3. APS March Meeting
   New Orleans, LA — March 2017
4. Moore Foundation EPIQS conference
   Aspen, CO — February 2017
5. Michigan State University, Department of Physics
   East Lansing, MI — February 2017
6. UC Irvine, Department of Physics
   Irvine, CA — February 2017
7. Institute of Science and Technology Austria
   Vienna, Austria — February 2017
8. University of Pennsylvania, Department of Materials Science and Engineering
   Philadelphia, PA — January 2017
9. Fudan University, Department of Physics
   Shanghai, China — September 2016
10. Hong Kong University of Science and Technology, Department of Physics
    Hong Kong, China — August 2016
11. ICFO - The Institute of Photonic Sciences
    Barcelona, Spain — July 2016
12. SLAC National Lab, Stanford Institute for Materials and Energy Sciences
    Stanford, CA — April 2016
13. Lawrence Berkeley National Lab, Molecular Foundry
    Berkeley, CA — August 2015
14. SPIE Photonic West Conference
    San Francisco, CA — February 2015
15. UC Berkeley, Kavli Energy NanoScience Institute Symposium
    Berkeley, CA — January 2015
16. Columbia University, Energy Frontier Research Center
    New York, NY — June 2014
17. SPIE Optics + Photonics
    San Diego, CA — August 2013
18. SPIE Photonic West Conference
    San Francisco, CA — January 2011
19. MRS Fall Meeting
    Boston, MA — December 2010

Publication List

1. **Ziliang Ye***, Dezheng Sun*, and Tony F. Heinz, "Optical manipulation of valley pseudospin", ***Nature Physics***, 13, 26 (2017).
2. **Ziliang Ye***, Ting Cao*, Kevin O'brien, Hanyu Zhu, Xiaobo Yin, Yuan Wang, Steven G. Louie, and Xiang Zhang, "Probing excitonic dark states in single-layer tungsten disulfide", ***Nature***, 513, 214 (2014).
3. Xiaobo Yin*, **Ziliang Ye***, Daniel A. Chenet*, Yu Ye*, Kevin O'Brien, James C. Hone, and Xiang Zhang, "Edge nonlinear optics on a MoS_2 atomic monolayer", ***Science***, 344, 6183 (2014).
4. Xiaobo Yin, **Ziliang Ye**, Junsuk Rho, Yuan Wang, and Xiang Zhang, "Photonic spin hall effect at metasurfaces", ***Science***, 339, 1405 (2013).
5. **Ziliang Ye**, Shuang Zhang, Yuan Wang, Yong-Shik Park, Thomas Zentgraf, Guy Bartal, Xiaobo Yin, and Xiang Zhang, "Mapping the near-field dynamics in plasmon-induced transparency", ***Physics Review B***, 86, 155148 (2012).
6. Shuang Zhang*, **Ziliang Ye***, Yuan Wang*, Yongshik Park, Guy Bartal, Michael Mrejen, Xiaobo Yin, and Xiang Zhang, "Anti-Hermitian plasmon coupling of an array of gold thin-film antennas for controlling light at the nanoscale", ***Physical Review Letters***, 109, 193902 (2012).
7. Volker J. Sorger*, **Ziliang Ye***, Rupert F. Oulton, Yuan Wang, Guy Bartal, Xiaobo Yin, and Xiang Zhang, "Experimental demonstration of low-loss optical waveguiding at deep sub-wavelength scales", ***Nature Communications***, 2, 331 (2011).
8. Junsuk Rho*, **Ziliang Ye***, Yi Xiong, Xiaobo Yin, Zhaowei Liu, Hyeun-Seok Choi, Guy Bartal, and Xiang Zhang, "Spherical hyperlens for two-dimensional sub-diffractional imaging at visible frequencies" ***Nature Communications***, 1, 143 (2010).
9. Mervin Zhao*, **Ziliang Ye***, Ryuji Suzuki*, Yu Ye, Hanyu Zhu, Jun Xiao, Yuan Wang, Yoshihiro Iwasa, and Xiang Zhang, "Atomically phase-matched second-harmonic generation in a 2D crystal", ***Light: Science & Applications,*** 5, e16131 (2016).
10. Jun Xiao, **Ziliang Ye**, Ying Wang, Hanyu Zhu, and Yuan Wang, and Xiang Zhang, "Nonlinear optical selection rule based on valley-exciton locking in monolayer WS_2", ***Light: Science & Applications***, 4, e366 (2015).
11. Yu Ye, **Ziliang Ye**, Majid Gharghi, Hanyu Zhu, Mervin Zhao, Xiaobo Yin, and Xiang Zhang, "Exciton-dominant electroluminescence from a diode of monolayer MoS_2", ***Applied Physics Letters***, 104, 193501 (2014).
12. Yu Ye, Jun Xiao, Hailong Wang, **Ziliang Ye**, Hanyu Zhu, Yuan Wang, Jianhua Zhao, Xiaobo Yin, and Xiang Zhang, "Electrical generation and control of the valley carriers in a monolayer transition metal dichalcogenide", ***Nature Nanotechnology***, 11, 598 (2016)
13. Hanyu Zhu, Yuan Wang, Jun Xiao, Ming Liu, Shaomin Xiong, Zi Jing Wong, **Ziliang Ye**, Yu Ye, Xiaobo Yin, and Xiang Zhang, "Observation of piezoelectricity in free-standing monolayer MoS_2", ***Nature Nanotechnology***, 10, 151 (2015)
14. Aimin Wu, Hao Li, Junjie Du, Xingjie Ni, **Ziliang Ye**, Yuan Wang, Zhen Sheng, Shichang Zou, Fuwan Gan, Xiang Zhang, and Xi Wang, "Experimental

demonstration of in-plane negative-angle refraction with an array of Silicon nano-posts", ***Nano Letters***, 15 (3), 2055 (2015)

15. Sadao Ota, Tongcang Li, Yimin Li, **Ziliang Ye**, Anna Labno, Xiaobo Yin, Mohammad-Reza Alam, and Xiang Zhang, "Brownian motion of tethered nanowires", ***Physics Review E***, 89, 053010 (2014)
16. David S. Barth, Christopher Gladden, Alessandro Salandrino, Kevin O'Brien, **Ziliang Ye**, Michael Mrejen, Yuan Wang, and Xiang Zhang, "Macroscale transformation optics enabled by photoelectrochemical etching", ***Advanced Materials***, 27, 40, 6131 (2015)
17. Archana Raja, Andrés Montoya-Castillo*, Johanna Zultak*, Xiao-Xiao Zhang, **Ziliang Ye**, Cyrielle Roquelet, Daniel A. Chenet, Arend M. van der Zande, Pinshane Huang, Steffen Jockusch, James Hone, David R. Reichman, Louis E. Brus, and Tony F. Heinz, "Energy transfer from quantum dots to graphene and MoS_2: the role of absorption and screening in two-dimensional materials", ***Nano letters***, 16 (4), 2328 (2016)
18. Christian Strelow, T. Sverre Theuerholz, Christian Schmidtke, Marten Richter, Jan-Philip Merkl, Hauke Kloust, **Ziliang Ye**, Horst Weller, Tony F. Heinz, Andreas Knorr, and Holger Lange, "Metal–semiconductor nanoparticle hybrids formed by self-organization: a platform to address exciton–plasmon coupling", ***Nano Letters,*** 16 (8), 4811 (2016)

* equal contributions among these authors