Biographical Sketch
An-Ping Li

Education/Training:

Chinese Academy of Sciences, Hefei	M.S.	1991	Solid State Physics
Peking University, Beijing	Ph.D.	1997	Condensed Matter Physics
Max-Plank-Institute of Microstructure Physics	Postdoc	1999	Condensed Matter

Research and Professional Experience:

2015 – present Theme Leader, Center for Nanophase Materials Sciences, Oak Ridge National Laboratory
Electronic properties of low-dimensional quantum materials, scanning probe microscopy

2009 – present Adjunct Associate Professor/Joint Faculty (Full) Professor, Department of Physics and Astronomy, University of Tennessee, Knoxville
Atomic presicion 2D materials sysnthesis and characterization

2002 – present Research Associate/Research Staff/Senior Staff, Oak Ridge National Laboratory
Electron transport at the nanoscale, muti-probe scanning tunneling microscopy/sperctroscopy, development of novel scanning probe microscopy techniques

2001 – 2002 Senior R&D Scientist, Project leader, Galian Photonics Inc., Vancover
Development of photonic crystal-based device structures

1999 – 2001 Visiting Scientist, NSF MRSEC, Michigan State University, East Lansing
Synthesis of diamond epitaxial thin films

1997 – 1999 Max-Planck-Institute Fellow, MPI for Microstructure Physics, Halle
Controlled self-assembly of periodic nanopore structures

1994 – 1997 Research Assistant, Peking University, Beijing
Electroluminescence of silicon quantum dot systems

1991 – 1994 Materials Engineer, The 13th Institute of Ministry of Electronics Industry of China
Epitaxial growth and characterization of III-V semiconductors

Selected Publications:

(Full list in Scholar Google: http://scholar.google.com/citations?user=uIHG-ZwAAAAJ&hl=en; ORCID: 0000-0003-4400-7493; ResearcherID: B-3191-2012)

1 Wonhee Ko, Giang D. Nguyen, Hoil Kim, Jun Sung Kim, X.-G. Zhang, An-Ping Li*, "Accessing the intrinsic spin transport in topological insulator by controlling the crossover of bulk-to-surface conductance", *Physical Review Letters* 121, 176801 (2018).

2 Giang D. Nguyen, Liangbo Liang, Qiang Zou, Mingming Fu, Akinola D. Oyedele, Bobby G. Sumpter, Zheng Liu, Zheng Gai, Kai Xiao, An-Ping Li*, "3D imaging and manipulation of subsurface selenium vacancies in PdSe2", *Phys. Rev. Lett*. 121, 086101 (2018).

3 Giang Nguyen, Jinhwan Lee, Tom Berlijn, Qiang Zou, Saban Hus, Jewook Park, Zheng Gai, Changgu Lee, and An-Ping Li*, "Visualization and manipulation of magnetic domains in quasi-2D material Fe_3GeTe_2", *Physical Review B* **97**, 014425 (2018).

4 Saban Hus, Xiaoguang Zhang, Giang Nguyen, Wonhee Ko, Arthur Baddorf, Yong Chen and An-Ping Li*, "Detection of Spin-Chemical Potential in Topological Insulators Using Spin-Polarized Four-Probe STM", *Physical Review Letters* **119**, 137202 (2017).

5 Chuanxu Ma, Zhongcan Xiao, Honghai Zhang, Liangbo Liang, Jingsong Huang, Wenchang Lu, Kunlun Hong, J. Bernholc, An-Ping Li*, "Controllable conversion of quasi-freestanding polymer chains to graphene nanoribbons", *Nature Communications*, 8, 14815 (2017).

6 Jewook Park, Changwon Park, Mina Yoon, and An-Ping Li*, "Surface Magnetism of Cobalt Nanoislands Controlled by Atomic Hydrogen", *Nano Letters* **17**, 292-298 (2017).

7 Corentin Durand, X.-G. Zhang, Saban M. Hus, Chuanxu Ma, Michael A. McGuire, Yong P. Chen, & An-Ping Li*, "Differentiation of surface and bulk conductivities in topological insulator via four-probe spectroscopy", *Nano Letters* **16**, 2213 (2016).
8 Lei Liu, Jewook Park, David A. Siegel, Kevin F. McCarty, Kendal W. Clark, Wan Deng, Leonardo Basile, J.-C. Idrobo, An-Ping Li*, Gong Gu*, "Heteroepitaxial Growth of Two-Dimensional Hexagonal Boron Nitride Templated by Graphene Edges", *Science* **343**, 163-167 (2014).
9 Jens Baringhaus, Ming Ruan, Frederik Edler, Antonio Tejeda, Muriel Sicot, Amina Taleb-Ibrahimi, An-Ping Li, Zhigang Jiang, Edward Conrad, Claire Berge, Christoph Tegenkamp, Walt A. de Heer*, "Exceptional ballistic transport in epitaxial graphene nanoribbons", *Nature* **506**, 349–354 (2014).
10 Kendal W. Clark, X.-G. Zhang, Gong Gu, Jewook Park, Guowei He, R. M. Feenstra, and An-Ping Li*, "Energy Gap Induced by Friedel Oscillations Manifested as Transport Asymmetry at Monolayer-Bilayer Graphene Boundaries", *Physical Review X* **4**, 011021 (2014).

Synergistic Activities:

1. Member of International Advisory and Program Committee, 16th International Conference on the Formation of Semiconductor Interfaces, July 02 – 07, 2017, Hannover, Germany.
2. Organizing Committee Chair, AVS 64 International Symposium and Exhibition, NANOMETER-SCALE SCIENCE & TECHNOLOGY, Oct 29-Nov 3, 2017, Tampa, Florida.
3. Organizing Committee Chair, AVS 64 International Symposium and Exhibition, SCANNING PROBE MICROSCOPY, Oct 29-Nov 3, 2017, Tampa, Florida.
4. Organizing Committee Chair, AVS 63 International Symposium and Exhibition, Scanning Probe Microscopy Focus Topic, Nov 6-11, 2016, Nashville, Tennessee.
5. Organizing Committee Member, AVS 63 International Symposium and Exhibition, 2D Materials Focus Topic, Nov 6-11, 2016, Nashville, Tennessee.
6. Organizing Committee Chair, Focus AVS 63 International Symposium and Exhibition, Scanning Probe Microscopy Focus Topic, Oct 18 – 23, 2015, San Jose, California.
7. Session chair, APS March meeting, DMP Graphene Focus Topic, 2015.
8. Organizing Committee Chair, Focus Topic on Scanning Probe Microscopy for AVS 61 International Symposium and Exhibition, Nov 9-14, 2014.
9. Organizing Committee Member, Focus Topic on In Situ Spectroscopy and Microscopy for AVS 61 International Symposium and Exhibition, Nov 9-14, 2014.
10. Organizing Committee Co-Chair, AVS Focus Topic Conference, Scanning Probe Microscopy, 2013.
11. Organizing Committee Chair, AVS Focus Topic Conference, Electron Transport at the nanoscale, 2012.
12. Organizing Committee Member, AVS Focus Topic Conference, Scanning Probe Microscopy, 2012.
13. Organizing Committee Member, 3rd International Workshop on Nanoscale Imaging for Energy Applications, 2012.
14. Organizing Committee Chair, AVS Focus Topic Conference, Electron Transport in Low-Dimensional Materials, 2011.
15. Executive Committee Member: AVS Tennessee Valley Chapter, 2012-present.
16. Panelist for the National Science Foundation

Honors/Awards

AVS Fellow, 2017
Performance Award, Oak Ridge National Laboratory, 2015, 2016
Significant Event Award for Outstanding Research, Oak Ridge National Laboratory, 2014
CNMS Division Award for Distinguished User Research, Oak Ridge National Laboratory, 2014
Performance Award, Oak Ridge National Laboratory, 2013
Max Planck Society Fellowship, Max Plank Society, Germany, 1997