

CURRICULUM VITAE

Junren Shi

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Education

1998-2002 Ph.D. in Physics – Oklahoma State University

1993-1998 Ph.D. program in Physics – Nanjing University, China (Advisor: Jinming Dong)

1989-1993 B.Sc. in Physics – Fujian Normal University, China

Thesis Title: Two-dimensional Metal-Insulator Transition

Ph.D Advisor: Professor X.C. Xie

Research and Employment

2005-Now Research Scientist – Institute of Physics, Chinese Academy of Sciences

2004-2005 Postdoctoral Fellow – The University of Texas at Austin

2002-2004 Postdoctoral Researcher – Oak Ridge National Laboratory

1998-2002 Research Assistant – Oklahoma State University

1993-1998 Research Assistant – Nanjing University, China

Awards

Research Excellence Award, Oklahoma State University, 2002

Outstanding Theoretical Research Assistant, Oklahoma State University, 1998-1999

Publications

1. “On a proper definition of spin current,” Ping Zhang, **Junren Shi**, Di Xiao, Qian Niu, submitted to Phys. Rev. Lett.
2. “Berry phase correction to electron density of states in solids,” Di Xiao, **Junren Shi**, Qian Niu, Phys. Rev. Lett. **95**, 137204 (2005).
3. “A low temperature disordered phase of α -Pb/Ge(111),” Jiandong Guo, **Junren Shi**, E. W. Plummer, Phys. Rev. Lett. **94**, 036105 (2005).
4. “A spectroscopic view of electron phonon coupling at metal surfaces,” S.-J. Tang, **Junren Shi**, Biao Wu, P. T. Sprunger, W. L. Yang, V. Brouet, X. J. Zhou, Z. Hussain, Z.-X. Shen, Zhenyu Zhang, and E. W. Plummer, Physica Status Solidi (b), **241**, 2345 (2004).
5. “Ferromagnetic Stability in Fe Nanodot Assemblies on Cu(111) Induced by Indirect Coupling through the Substrate,” J. P. Pierce, M. A. Torija, Z. Gai, **Junren Shi**, T. C. Schulthess, G. A. Farnan, J. F. Wendelken, E. W. Plummer, J. Shen, Phys. Rev. Lett. **92**, 237201 (2004).

6. "Identification of Multiple Fine Structures in Electron Self-Energy of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$," X. J. Zhou, **Junren Shi**, T. Yoshida, T. Cuk, W.L. Yang, V. Brouet, J. Nakamura, N. Mannella, S. Komiya, Y. Ando, F. Zhou, W. X. Ti, J. W. Xiong, Z. X. Zhao, T. Sasagawa, T. Kakeshita, H. Eisaki, S. Uchida, A. Fujimori, Zhenyu Zhang, E. W. Plummer, R. B. Laughlin, Z. Hussain, and Z.-X. Shen, *Phys. Rev. Lett.* **95**, 117001 (2005).
7. "Direct extraction of the Eliashberg function for electron-phonon coupling: A case study of $\text{Be}(10\bar{1}0)$," **Junren Shi**, S.-J Tang, Biao Wu, P.T. Sprunger, W.L. Yang, V. Brouet, X.J. Zhou, Z. Hussain, Z.-X. Shen, Zhenyu Zhang, E.W. Plummer, *Phys. Rev. Lett.* **92**, 186401 (2004).
8. "Enhanced electron-phonon coupling at metal surfaces," E.W. Plummer, **Junren Shi**, S.J. Tang, E. Rotenberg, S.D. Kevan, *Prog. Surf. Sci.* **74**, 251 (2003).
9. "Radiation induced 'zero resistance state' and photon-assisted transport," **Junren Shi** and X.C. Xie, *Phys. Rev. Lett.* **91**, 086801 (2003).
10. "Surface Phase Transitions Induced by Electron Mediated Adatom-Adatom Interaction," **Junren Shi**, Biao Wu, X.C. Xie, E.W. Plummer, Zhenyu Zhang, *Phys. Rev. Lett.* **91**, 076103 (2003).
11. "The Droplet State and the Compressibility Anomaly in Dilute 2D Electron Systems," **Junren Shi** and X.C. Xie, *Phys. Rev. Lett.* **88**, 086401 (2002).
12. "Dephasing effect in photon-assisted resonant tunneling through quantum dots," **Junren Shi**, Zhongshui Ma, and X.C. Xie, *Phys. Rev. B* **63**, R201311 (2001) *Rapid Communications*.
13. "Dephasing and the metal-insulator transition," **Junren Shi** and X.C. Xie, *Phys. Rev. B* **63**, 045123 (2001).
14. "Quantum ac transport through coupled quantum dots," Zhongshui Ma, **Junren Shi**, and X.C. Xie, *Phys. Rev. B* **62**, 15352 (2000).
15. "Droplet state in an interacting two-dimensional electron system," **Junren Shi**, Song He, and X.C. Xie, *Phys. Rev. B* **60**, R13950 (1999) *Rapid Communications*.
16. "Theory of dc currents in SIS junctions with anisotropic pairing symmetry," **Junren Shi**, J.M. Dong, Z.D. Wang, *Superlattice. Microstruct.* **25**, 1067 (1999).
17. "Conductance fluctuation of the normal metal in an SNS structure," **Junren Shi**, J.M. Dong, D.Y. Xing, Z.D. Wang, *Commun. Thero. Phys.* **30**, 507 (1998).
18. "Conductance oscillation in a ferromagnet-insulator-ferromagnet-superconductor (FIFS) structure," **Junren Shi**, J.M. Dong, D.Y. Xing, *Physica C* **282**, 1853 (1997).
19. "Conductance oscillation of a mesoscopic normal metal spanning unconventional and conventional superconductors," **Junren Shi**, J.M. Dong, D.Y. Xing, and Z.D. Wang *Phys. Rev. B* **56**, 14822 (1997).

Invited Presentations

1. "Berry phase correction and electron dynamics in solids," Institute of Physics, Chinese Academy of Sciences, 2005.
2. "Direct extraction of the Eliashberg function from high-resolution angle-resolved photoemission," 11th International Conference on Vibration at Surfaces, 2004.
3. "Quantum dephasing and low-dimensional transport," APS March Meeting, 2003.
4. "Droplet state, semi-classical percolation and 2D metal-insulator transition," Oak Ridge National Laboratory, 2001.

Presentations

1. "Surface phase transitions and electron mediated long-rang interaction," Physical Electronics Conference, 2003.
2. "Surface phase transitions and electron mediated long-rang interaction," APS March Meeting, 2003.
3. "The disorder effect and the compressibility abnormality in dilute 2D electron systems," APS March Meeting 2001.
4. "Dephasing and Metal-Insulator Transition," APS March Meeting 2000.
5. "A possible droplet ground state in 2D electron systems," APS Centennial Meeting 1999.
6. "A quasi-quantum percolation and metal-insulator transition in 2D electron systems," APS Centennial Meeting 1999.