Curriculum Vitae

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Peking University, Beijing, P.R. China	Ph.D.	1995	Surface Science
Peking University, Beijing, P. R. China	B.S.	1989	Condensed Matter Physics

Research and Professional Experience:

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Visiting Professor (May 2004 – August 2005)

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Associate Professor (August 1997 – November 2000)

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Sakurai Lab, Institute for Materials Research, Tohoku University, Japan.

Visiting Scientist (March 1997 – May 1997)

Department of Material Science, State University of New York, Stony Brook, USA.

Postdoctoral Fellow (July 1995 – July 1997)

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Professional Activities, Honors, Awards:

2008–present	Chair Elected, and Executive Committee, Magnetic Interface and Nanostructure Division, American Vacuum Society
2001–present	Member: Materials Research Society, American Vacuum Society, and American Physical Society
1999	Outstanding Doctoral Thesis Award, Education Ministry, P.R. China
1998	Award for Progress in Science and Technology (2nd grade), Education Ministry, P.R. China
1997	Hu Gangfu Physics Award, Chinese Association of Physics
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Graduate Advisees: X. W. Tu (Peking University), Lu Chi (Peking University), Lei Zhang (Peking University), Kenji Fuchigami (University of Tennessee) (with Jian Shen), Min Gao (Institute of Physics, Chinese Academy of Sciences), Jieyu Yi (University of Tennessee, with David Mandrus), Siwei Tang (University of Tennessee, with David Mandrus), Mingming Fu (XiaMen University).

Postdoctoral Scholars: Lan Gao, Deyong Wang, Lifeng Yin, Guixin Cao, Qiang Zou, Giang D. Nguyen.

Collaborators:

T. Sakurai (Tohoku University, Japan), Heinrich Rohrer (visiting professor of Tohoku Universtiy), W.S. Yang (Peking University, China), J. Kirschner (Max-Planck-Institut, Germany), Hans-Peter Oepen (University of Hamburg, Germany), J.W.M. Frenken (Leiden University, Netherlands), M. T. Lin (Taiwan National University), H. J. Gao (IOP, China), M. Wang (Nanjing University, China), Qikun Xue (Tsinghua University), J.F. Jia (Shanghai Jiaotong University), Z. Zhang (USTC, China), Jian Shen (Fudan University), D. J. Keavney (APS, Argonne), Lian Li (University of Wisconsin, Milwaukee), J.M. Cao (Florida State University), G. Mankey (University of Alabama), J. Zhang (Louisiana State University), E. W. Plummer (Louisiana State University), G. M. Stocks (ORNL), J. F. Wendelken (ORNL), Kunlun Hong (ORNL), X.L. Ke (ORNL), S. Dai (ORNL), Jane Howe (ORNL), X. G. Zhang (ORNL).

Publications: (134 peer-reviewed papers)

1. “Dimensionality effect on the magnetic soliton phase of 2D chiral helimagnet Cr1/3NbS2”, Siwei Tang, Qiang Zou, Jieyu Yi, Randy Fishman, Satoshi Okamoto, An-Ping Li, David Mandrus, and **Zheng Gai**, Nano Letters, accepted (2018).

2. “Removal of Magnetic Dead Layer by Geometric Design”, Er-Jia Guo, Manuel Roldan, Timothy Charlton, Zhaoliang Liao, Qiang Zheng, Haile Ambaye, Andreas Herklotz, **Zheng Gai**, T. Zac Ward, Ho Nyung Lee, and Michael R. Fitzsimmons, Adv. Funct. Mater. accepted (2018).

3. “Persistent Photomagnetism in Superparamagnetic Iron Oxide Nanoparticles”, Shuai He, Joseph S. DuChene, Jingjing Qiu, **Zheng Gai***, Wei David Wei*, Advanced Electronic Materials, in press (2018). DOI: 10.1002/aelm.201700661

4. “Visualization and manipulation of magnetic domains in the quasi-2D material Fe3GeTe2”, Giang D. Nguyen, Jinhwan Lee, Tom Berlijn, Qiang Zou, Saban M. Hus, Jewook Park, **Zheng Gai**, Changgu Lee, and An-Ping Li, Phys. Rev. B, 97, 014425 (2018).

5. “The KDK (potassium decay) experiment”, P.C.F. Di Stefano, N. Brewer, A. Fijałkowska, **Z. Gai**, K.C. Goett, R. Grzywacz, D. Hamm, P. Lechner, Y. Liu, E. Lukosi, M. Mancuso, C. Melcher, J. Ninkovic, F. Petricca, B.C. Rasco, C. Rouleau, K.P. Rykaczewski, P. Squillari, L. Stand, D. Stracener, M. Stukel, M. Wolińska-Cichocka and I. Yavin, Proceeding of XV International Conference on Topics in Astroparticle and Underground Physics, (2017).

6. “Magnetic ground state of the Ising-like antiferromagnet DyScO3”, L. S. Wu, S. E. Nikitin, M. Frontzek, A. I. Kolesnikov, G. Ehlers, M. D. Lumsden, K. A. Shaykhutdinov, E.-J. Guo, A. T. Savici, **Z. Gai**, A. S. Sefat, and A. Podlesnyak, Phys. Rev. B, 96, 144407 (2017).

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8. “Pressure effects on spin-lattice coupling of CdCr2S4”, Gonçalo Oliveira, Antonio dos Santos, **Zheng Gai**, G. Halder, J.P. Araújo, A.M.L. Lopes, and Andre Pereira, J. Alloy Compd, 715, 83 (2017).

9. “Improving quantum-transition temperatures in BaFe2As2-based crystals by removing local-lattice strain and electronic-structure disorder”, L. Li, Q. Zheng, Q. Zou, S. Rajput, A.O. Ijaduola, Z. Wu, X.P. Wang, H.B. Cao, M. Chi, **Z. Gai**, D. Parker, A.S. Sefat, Sci. Rep. 7, 949 (2017).

10. “Highly insulating ferromagnetic cobaltite heterostructures”, Woo Seok Choi, Kyeong Tae Kang, Hyoungjeen Jeen, **Zheng Gai**, Ho Nyung Lee, Curr. Appl. Phys. 17, 722 (2017).

11. “Effect of surface morphology and magnetic impurities on the electronic structure in cobalt-doped BaFe2As2 superconductors” Qiang Zou, Zhiming Wu, Mingming Fu, Chunmiao Zhang, S. Rajput, Yaping Wu, Li Li, D. S. Parker, Junyong Kang, A.S. Sefat, **Zheng Gai**, Nano Lett. 17, 1642 (2017).

12. “Paramagnetic properties of metal-free Boron-doped graphene quantum dots and their application for safe magnetic resonance imaging”, Hui Wang, Richard Revia, Kui Wang, Rajeev J Kant, Qingxin Mu, **Zheng Gai**, Kunlun Hong, and Miqin Zhang, Adv. Mater. 29, 1605416 (2017).

13. “Competing antiferromagnetism in a quasi-2d itinerant ferromagnetism system: Fe3GeTe2”, Jieyu Yi, Houlong Zhuang, Qiang Zou, Zhiming Wu, Guixin Cao, Siwei Tang, P. R. C. Kent, David Mandrus, and **Zheng Gai**, 2D Materials 4 (1), 011005 (2017).

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15. “Electronic structure of the chiral helimagnet and 3d-intercalated transition metal dichalcogenide Cr1/3NbS2”, N. Sirica, S. -K. Mo, F. Bondino, I. Pis, S. Nappini, P. Vilmercati, J. Yi, **Z. Gai**, P. C. Snijders, P. K. Das, I. Vobornik, N. Ghimire, M. R. Koehler, D. Sapkota, D. S. Parker, D. G. Mandrus, and N. Mannella, Phys. Rev. B, 94, 075141 (2016).

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Yanwen Zhang, Hangwen Guo, Siwei Tang, Wenbin Wang, Jieyu Yi, Claudia Cantoni, Wolter Siemons, E. Andrew Payzant, Michael Biegalski, T.Z. Ward, David Mandrus, Malcolm Stocks, and **Zheng Gai**, Phys. Rev. Lett. 114, 147202 (2015).

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38. "Nanostructured Metal/Carbon Composites from Heterobimetallic Block Copolymers with Controlled Magnetic Properties", Jiuyang Zhang, Yi Yan, Jihua Chen, Michael W. Chance, Jeffery Hayat, **Zheng Gai** and Chuanbing Tang, Chemistry of Materials, 26, 3185 (2014).

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43. “Magneto-Dielectric Effects Induced by Optically-Generated Intermolecular Charge-Transfer States in Organic Semiconducting Materials”, Huidong Zang, Liang Yan, Mingxing Li, Lei He, **Zheng Gai**, Ilia Ivanov, Ming Wang, Long Chiang, Augustine Urbas, and Bin Hu, Scientific Reports, 3, 2812 (2013).

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