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EDUCATION:

- August 2005 to May 2010
Ph.D., Department of Physics, the University of Tennessee
Advisor: Professor Pengcheng Dai
- September 2002 to July 2005
M. S., Institute of Physics, Chinese Academy of Sciences, Beijing, China
Advisor: Professor Zhongxian Zhao
- September 1998 - July 2002
B. S., Physics Department, Tsinghua University, Beijing, China

EMPLOYMENT:

- 2010-2012 Miller Research Fellow, University of California, Berkeley
- 2012-2014 Professor, Department of Physics, Fudan University
- 2014-2023 Xie Xide Junior Chair Professor, Department of Physics, Fudan University
- 2021-present Deputy Director, State Key Laboratory of Surface Physics, China
- 2023-present Xie Xide Chair Professor, Department of Physics, Fudan University

SELECTED HONORS AND AWARDS:

- 2020 第十届上海市青年科技英才
- 2019 教育部青年科学奖
- 2018 万人计划领军人才
- 2018 Sir Martin Wood China Prize
- 2018 中青年科技创新领军人才
- 2017 长江学者特聘教授
- 2014 求是杰出青年学者奖
- 2012 国家特聘专家（青年项目）
- 2010 Miller Fellowship, University of California, Berkeley
- 2010 Outstanding Dissertation in Magnetism Award, American Physical Society

RESEARCH TECHNIQUES AND INTERESTS:

- Utilizing various neutron-scattering techniques to study the lattice structures, magnetic structures, spin excitations, and phase transitions of unconventional superconductors and quantum magnets.

- Growth of single crystals of strongly correlated systems using methods such as the traveling solvent floating zone, flux, and Bridgeman techniques.

PUBLICATIONS:

1. Superconductivity in pressurized trilayer $\text{La}_4\text{Ni}_3\text{O}_{10-\delta}$ single crystals
Yinghao Zhu†, Di Peng†, Enkang Zhang†, Bingying Pan†, Xu Chen†, Lixing Chen, Huifen Ren, Feiyang Liu, Yiqing Hao, Nana Li, Zhenfang Xing, Fujun Lan, Jiyuan Han, Junjie Wang, Donghan Jia, Hongliang Wo, Yiqing Gu, Yimeng Gu, Li Ji, Wenbin Wang, Huiyang Gou, Yao Shen, Tianping Ying, Xiaolong Chen, Wenge Yang, Huibo Cao, Changlin Zheng, Qiaoshi Zeng*, Jian-gang Guo* & Jun Zhao*
arXiv:2311.07353 (2023) *Nature* (in press)
2. Signatures of Kitaev Interactions in the van der Waals Ferromagnet VI_3
Yiqing Gu, Yimeng Gu, Feiyang Liu, Seiko Ohira-Kawamura, Naoki Murai, and Jun Zhao*
Physical Review Letters 132, 246702 (2024) *Editors' Suggestions*
3. Interplay between crystal field and magnetic anisotropy in the triangular-lattice antiferromagnet NaTmTe_2
Shiyi Zheng, Yiqing Gu, Yimeng Gu, Zeyu Kao, Qisi Wang, Hongliang Wo, Yinghao Zhu, Feiyang Liu, Liusuo Wu, Jieming Sheng, Johan Chang, Seiko Ohira-Kawamura, Naoki Murai, Christof Niedermayer, Daniel Gabriel Mazzone, Gang Chen, and Jun Zhao*
Physical Review B 109, 075159 (2024)
4. Noncoplanar magnetic order in the breathing kagome lattice compound $\text{Pb}(\text{OF})\text{Cu}_3(\text{SeO}_3)_2(\text{NO}_3)$
Yimeng Gu, Zeyu Kao, Yiqing Hao, Weiqin Zhu, Qiang Zhang, Yan Wu, Changsong Xu, Huibo Cao, and Jun Zhao*
Physical Review B 109, 024402 (2024)
5. Exchange-renormalized crystal field excitations in the quantum Ising magnet KTmSe_2
Shiyi Zheng, Hongliang Wo, Yiqing Gu, Rui Leonard Luo, Yimeng Gu, Yinghao Zhu, Paul Steffens, Martin Boehm, Qisi Wang, Gang Chen*, and Jun Zhao*
Physical Review B 108, 054435 (2023) *Editors' Suggestions*
6. Pressure-induced charge orders and their postulated coupling to magnetism in hexagonal multiferroic LuFe_2O_4
Fengliang Liu, Yiqing Hao, Jinyang Ni, Yongsheng Zhao, Dongzhou Zhang, Gilberto Fabbri, Daniel Haskel, Shaobo Cheng, Xiaoshan Xu, Lifeng Yin, Hongjun Xiang, Jun Zhao, Xujie Lü, Wenbin Wang*, Jian Shen* & Wenge Yang*
npj Quantum Materials 8, 1 (2023)
7. Spin fluctuations in $\text{Sr}_{1.8}\text{La}_{0.2}\text{RuO}_4$
Zheng He, Qisi Wang*, Yu Feng, Chul Kim, Wonshik Kyung, Changyoung Kim, Hongliang Wo, Gaofeng Ding, Yiqing Hao, Feiyang Liu, Helen C. Walker, Devashibhai T. Adroja, Astrid Schneidewind, Wenbin Wang, and Jun Zhao*
Physical Review B 107, L201107 (2023)
8. Stripe order and spin dynamics in the triangular-lattice antiferromagnet KerSe_2 : A single-crystal study with a theoretical description
Gaofeng Ding, Hongliang Wo, Rui Leonard Luo, Yimeng Gu, Yiqing Gu, Robert Bewley, Gang Chen*, and Jun Zhao*
Physical Review B 107, L100411 (2023)
9. Effect of chromium doping on superconductivity and charge density wave order in the kagome metal $\text{Cs}(\text{V}_{1-x}\text{Cr}_x)_3\text{Sb}_5$
Gaofeng Ding, Hongliang Wo, Yiqing Gu, Yimeng Gu, and Jun Zhao*
Physical Review B 106, 235151 (2022)
10. Low-energy spin fluctuations in $\text{FeSe}_{0.95}\text{S}_{0.05}$
Die Hu, Qisi Wang*, Hongliang Wo, Astrid Schneidewind, and Jun Zhao*
Physical Review B 106, 214522 (2022)
11. Frustrated Magnetic Interactions and Quenched Spin Fluctuations in CrAs
Yayuan Qin, Yao Shen*, Yiqing Hao, Hongliang Wo, Shoudong Shen, Russell A. Ewings, Yang Zhao, Leland W. Harriger, Jeffrey W. Lynn and Jun Zhao*
Chinese Physics Letters 39, 127501 (2022)

12. Frustrated magnetic interactions in FeSe
Yiqing Gu, Qisi Wang, Hongliang Wo, Zheng He, Helen C. Walker, Jitae T. Park, Mechthild Enderle, Andrew D. Christianson, Wenbin Wang, and Jun Zhao*
Physical Review B 106, L060504 (2022)
13. Uniaxial pressure induced stripe order rotation in $\text{La}_{1.88}\text{Sr}_{0.12}\text{CuO}_4$
Qisi Wang*, K. von Arx, D. G. Mazzone, S. Mustafi, M. Horio, J. Küspert, J. Choi, D. Bucher, H. Wo, J. Zhao, W. Zhang, T. C. Asmara, Y. Sassa, M. Månsson, N. B. Christensen, M. Janoschek, T. Kurosawa, N. Momono, M. Oda, M. H. Fischer, T. Schmitt and J. Chang*
Nature Communications 13, 1795 (2022)
14. Unusual Band Splitting and Superconducting Gap Evolution with Sulfur Substitution in FeSe
Yuanyuan Yang, Qisi Wang, Shaofeng Duan, Hongliang Wo, Chaozhi Huang, Shichong Wang, Lingxiao Gu, Dong Qian, Jun Zhao and Wentao Zhang*
Chinese Physics Letters 39, 057302 (2022)
15. Anomalous Contribution to the Nematic Electronic States from the Structural Transition in FeSe Revealed by Time- and Angle-Resolved Photoemission Spectroscopy
Yuanyuan Yang, Qisi Wang, Shaofeng Duan, Hongliang Wo, Chaozhi Huang, Shichong Wang, Lingxiao Gu, Dao Xiang, Dong Qian, Jun Zhao, and Wentao Zhang*
Physical Review Letters 128, 246401 (2022)
16. Field-tuned quantum effects in a triangular-lattice Ising magnet
Yayuan Qin, Yao Shen, Changle Liu, Hongliang Wo, Yonghao Gao, Yu Feng, Xiaowen Zhang, Gaofeng Ding, Yiqing Gu, Qisi Wang, Shoudong Shen, Helen C. Walker, Robert Bewley, Jianhui Xu, Martin Boehm, Paul Steffens, Seiko Ohira-Kawamura, Naoki Murai, Astrid Schneidewind, Xin Tong, Gang Chen*, Jun Zhao*
Science Bulletin 67, 38-44 (2022)
17. Neutron Scattering Studies of the Breathing Pyrochlore Antiferromagnet $\text{LiGaCr}_4\text{O}_8$
Zheng He, Yiqing Gu, Hongliang Wo, Yu Feng, Die Hu, Yiqing Hao, Yimeng Gu, Helen C. Walker, Devashibhai T. Adroja, and Jun Zhao*
Physical Review Letters 127, 147205 (2021)
18. Polarized neutron scattering studies of magnetic excitations in iron-selenide superconductor $\text{Li}_{0.8}\text{Fe}_{0.2}\text{ODFeSe}$ ($T_c = 41$ K)
Die Hu, Yu Feng, Jitae T Park, Hongliang Wo, Qisi Wang, Frédéric Bourdarot, Alexandre Ivanov and Jun Zhao*
Journal of Physics: Condensed Matter 33, 45LT01 (2021)
19. Survival of itinerant excitations and quantum spin state transitions in YbMgGaO_4 with chemical disorder
X. Rao, G. Hussain, Q. Huang, W. J. Chu, N. Li, X. Zhao, Z. Dun, E. S. Choi, T. Asaba, L. Chen, L. Li, X. Y. Yue, N. N. Wang, J.-G. Cheng, Y. H. Gao, Y. Shen, J. Zhao, G. Chen*, H. D. Zhou* and X. F. Sun*
Nature Communications 12, 4949 (2021)
20. Magnetic Order and Its Interplay with Structure Phase Transition in van der Waals Ferromagnet VI_3
Yiqing Hao, Yiqing Gu, Yimeng Gu, Erxi Feng, Huibo Cao, Songxue Chi, Hua Wu, and Jun Zhao*
Chinese Physics Letters 38, 096101 (2021)
21. Magnetic frustration and quantum fluctuation in rare-earth triangular-lattice magnets
QIN Ya-Yuan, SHEN Yao, CHEN Gang*, ZHAO Jun*
Wuli 50, 454-462 (2021)
22. Critical Role of Sc Substitution in Modulating Ferroelectricity in Multiferroic LuFeO_3
Shiqing Deng, Jun Li, Didrik R. Småbråten, Shoudong Shen, Wenbin Wang, Jun Zhao, Jing Tao, Ulrich Aschauer, Jun Chen, Yimei Zhu, and Jing Zhu*
Nano Letters 21, 6648-6655 (2021)
23. Structure and frustrated magnetism of the two dimensional triangular lattice antiferromagnet $\text{Na}_2\text{BaNi}(\text{PO}_4)_2$
Fei Ding, Yongxiang Ma, Xiangnan Gong, Die Hu, Jun Zhao, Lingli Li, Hui Zheng, Yao Zhang, Yongjiang Yu, Lichun Zhang, Fengzhou Zhao and Bingying Pan*
Chinese Physics B 30 117505 (2021)

24. Evolution of spin excitations from bulk to monolayer FeSe
Jonathan Pelliciari*, Seher Karakuzu, Qi Song, Riccardo Arpaia, Abhishek Nag, Matteo Rossi, Jiemin Li, Tianlun Yu, Xiaoyang Chen, Rui Peng, Mirian arcía-Fernández, Andrew C. Walters, Qisi Wang, *Jun Zhao*, Giacomo Ghiringhelli, Donglai Feng, Thomas A. Maier, Ke-Jin Zhou, Steven Johnston & Riccardo Comin*
Nature Communications 12, 3122 (2021)
25. Observation of robust edge superconductivity in Fe(Se,Te) under strong magnetic perturbation
Da Jiang*, Yinping Pan, Shiyuan Wang, Yishi Lin, Connor M. Holland, John R. Kirtley, Xianhui Chen, *Jun Zhao*, Lei Chen, Shaoyu Yin*, Yihua Wang*
Science Bulletin 66, 425 (2021)
26. Quantum phase transitions in a quasi-one-dimensional Ising quantum magnet in transverse fields
Xiaowen Zhang, Zheng He, Yiqing Hao, Yao Shen, Shoudong Shen, Yu Feng, Guangyong Xu, Nicholas P. Butch, Gøran Nilsen, Wenbin Wang*, and *Jun Zhao**
Physical Review B 103, 144405 (2021)
27. Observation of an electronic order along [110] direction in FeSe
Kunliang Bu, Wenhao Zhang, Ying Fei, Yuan Zheng, Fangzhou Ai, Zongxiu Wu, Qisi Wang, Hongliang Wo, *Jun Zhao* and Yi Yin*
Nature Communications 12, 1385 (2021)
28. Field-tuned magnetic structure and phase diagram of the honeycomb magnet YbCl₃
YiQing Hao, HongLiang Wo, YiMeng Gu, XiaoWen Zhang, YiQing Gu, ShiYi Zheng, Yang Zhao, GuangYong Xu, Jeffery W. Lynn, Kenji Nakajima, Naoki Murai, WenBin Wang*, *Jun Zhao**
Science China Physics, Mechanics & Astronomy 64, 237411 (2021)
29. Anomalous helimagnetic domain shrinkage due to the weakening of the Dzyaloshinskii-Moriya interaction in CrAs
B. Y. Pan, H. C. Xu, Y. Liu, R. Sutarto, F. He, Y. Shen, Y. Q. Hao, *J. Zhao*, Leland Harriger, and D. L. Feng*
Physical Review B 102, 104432 (2020)
30. High-temperature charge-stripe correlations in La_{1.675}Eu_{0.2}Sr_{0.125}CuO₄
Qisi Wang*, M. Horio, K. von Arx, Y. Shen, D. John Mukkattukavil, Y. Sassa, O. Ivashko, C. E. Matt, S. Pyon, T. Takayama, H. Takagi, T. Kurosawa, N. Momono, M. Oda, T. Adachi, S. M. Haidar, Y. Koike, Y. Tseng, W. Zhang, *J. Zhao*, K. Kummer, M. Garcia-Fernandez, Ke-Jin Zhou, N. B. Christensen, H. M. Rønnow, T. Schmitt, and J. Chang*
Physical Review Letters 124, 187002 (2020)
31. Approaching itinerant magnetic quantum criticality through a Hund's coupling induced electronic crossover in the YFe₂Ge₂ superconductor
D. Zhao, H. L. Wo, J. Li, D. W. Song, L. X. Zheng, S. J. Li, L. P. Nie, X. G. Luo, *J. Zhao*, T. Wu*, and X. H. Chen
Physical Review B 101, 064511 (2020)
32. Neutron spin resonance in the heavily hole-doped KFe₂As₂ superconductor
Shoudong Shen#, Xiaowen Zhang#, Hongliang Wo, Yao Shen, Yu Feng, A. Schneidewind, P. Čermák, Wenbin Wang, and *Jun Zhao**
Physical Review Letters 124, 017001 (2020)
33. Neutron scattering studies on unconventional superconductors
Wo Hong-liang, Wang Qi-si, Shen Yao and *Zhao Jun**
Wuli 48, 790-799 (2019)
34. Pressure-induced large enhancement of Néel temperature and electric polarization in the hexagonal multiferroic Lu_{0.5}Sc_{0.5}FeO₃
Fengliang Liu, Changsong Xu, Shoudong Shen, Nana Li, Hangwen Guo, Xujie Lü, Hongjun Xiang, L. Bellaiche, *Jun Zhao*, Lifeng Yin, Wenge Yang*, Wenbin Wang*, and Jian Shen*
Physical Review B 100, 214408 (2019)
35. Study of intrinsic defect states of FeSe with scanning tunneling microscopy
Kunliang Bu, Bo Wang, Wenhao Zhang, Ying Fei, Yuan Zheng, Fangzhou Ai, Zongxiu Wu, Qisi Wang, Hongliang Wo, *Jun Zhao*, Chuanhong Jin, and Yi Yin*
Physical Review B 100, 155127 (2019)

36. Intertwined dipolar and multipolar order in the triangular-lattice magnet TmMgGaO₄
 Yao Shen, Changle Liu, Yayuan Qin, Shoudong Shen, Yao-Dong Li, Robert Bewley, Astrid Schneidewind, Gang Chen* and *Jun Zhao**
Nature Communications 10, 4530 (2019)
37. Quantitative characterization of short-range orthorhombic fluctuations in FeSe through pair distribution function analysis
 Benjamin A. Frandsen*, Qisi Wang, Shan Wu, *Jun Zhao*, and Robert J. Birgeneau
Physical Review B 100, 020504(R) (2019)
38. Intertwined spin and orbital density waves in MnP uncovered by resonant soft X-ray scattering
 Bingying Pan, Hoyoung Jang, Jun-Sik Lee, Ronny Sutarto, Feizhou He, J. F. Zeng, Yang Liu, Xiaowen Zhang, Yu Feng, Yiqing Hao, *Jun Zhao*, H. C. Xu, Z. H. Chen, Jiangping Hu* and Donglai Feng*
Physical Review X 9, 021055 (2019)
39. Coexistence of ferromagnetic and stripe-type antiferromagnetic spin fluctuations in YFe₂Ge₂
 Hongliang Wo, Qisi Wang, Yao Shen, Xiaowen Zhang, Yiqing Hao, Yu Feng, Shoudong Shen, Zheng He, Bingying Pan, Wenbin Wang, K. Nakajima, S. Ohira-Kawamura, P. Steffens, M. Boehm, K. Schmalzl, T. R. Forrest, M. Matsuda, Yang Zhao, J. W. Lynn, Zhiping Yin and *Jun Zhao**
Physical Review Letters 122, 217003 (2019)
40. Magnetic ground state of KCr₃As₃
 Yu Feng, Xiaowen Zhang, Yiqing Hao, A. D. Hillier, D. T. Adroja, and *Jun Zhao**
Physical Review B 99, 174401 (2019)
41. Evidence of nodal gap structure in the basal plane of the FeSe superconductor
 Pabitra K. Biswas*, Andreas Kreisel, Qisi Wang, Devashibhai T. Adroja, Adrian D. Hillier, *Jun Zhao*, Rustem Khasanov, Jean-Christophe Orain, Alex Amato and Elvezio Morenzoni
Physical Review B 98, 180501(R) (2018)
42. Infrared spectroscopy study of ironbased superconductor Li_{0.8}Fe_{0.2}ODFeSe
 Lin Tong, Hu Die, Shi Li-Yu, Zhang Si-Jie, Liu Yan-Qi, Lv Jia-Lin, Dong Tao, *Zhao Jun*, Wang Nan-Lin*
Acta Physica Sinica 67, 207102 (2018)
43. Fractionalized excitations in the partially magnetized spin liquid candidate YbMgGaO₄
 Yao Shen, Yao-Dong Li, H. C. Walker, P. Steffens, M. Boehm, Xiaowen Zhang, Shoudong Shen, Hongliang Wo, Gang Chen* and *Jun Zhao**
Nature Communications 9, 4138 (2018)
44. Effect of spin-orbit coupling on the effective-spin correlation in YbMgGaO₄
 Yao-Dong Li, Yao Shen, Yuesheng Li, *Jun Zhao*, Gang Chen*
Physical Review B 97, 125105 (2018)
45. Structure of spin excitations in heavily electron-doped Li_{0.8}Fe_{0.2}ODFeSe superconductors
 Bingying Pan#, Yao Shen#, Die Hu, Yu Feng, J.T. Park, A.D. Christianson, Qisi Wang, Yiqing Hao, Hongliang Wo, Zhiping Yin, T.A. Maier and *Jun Zhao**
Nature Communications 8, 123 (2017)
46. Superconductivity across Lifshitz transition and anomalous insulating state in surface K-dosed (Li_{0.8}Fe_{0.2}OH) FeSe
 Mingqiang Ren, Yajun Yan, Xiaohai Niu, Ran Tao, Die Hu, Rui Peng, Binping Xie, *Jun Zhao*, Tong Zhang* and Dong-Lai Feng*
Science Advances 3, e1603238 (2017)
47. Measurement of Meissner effect in micro-sized Nb and FeSe crystals using an NbN nano-SQUID
 Long Wu, Lei Chen*, Hao Wang, Qisi Wang, Hongliang Wo, *Jun Zhao*, Xiaoyu Liu, Xiaolei Wu and Zhen Wang*
Superconductor Science and Technology 30, 074011 (2017)
48. Nodal superconducting gap structure in the quasi-one-dimensional Cs₂Cr₃As₃ investigated using MuSR measurements
 D. T. Adroja*, A. Bhattacharyya, M. Smidman, A. D. Hillier, Y. Feng, B. Pan, *J. Zhao*, M. R. Lees, A. M. Strydom and P. K. Biswas
Journal of the Physical Society of Japan 86, 044710 (2017)

49. Multiband one-dimensional electronic structure and spectroscopic signature of Tomonaga-Luttinger liquid behavior in $K_2Cr_3As_3$
M. D. Watson*, Y. Feng, C. W. Nicholson, C. Monney, J. M. Riley, H. Iwasawa, K. Refson, V. Sacksteder, D. T. Adroja, *J. Zhao* and M. Hoesch
Physical Review Letters 118, 097002 (2017)
50. Evidence for a spinon Fermi surface in a triangular-lattice quantum-spin-liquid candidate
Yao Shen, Yao-Dong Li, Hongliang Wo, Yuesheng Li, Shoudong Shen, Bingying Pan, Qisi Wang, H. C. Walker, P. Steffens, M. Boehm, Yiqing Hao, D. L. Quintero-Castro, L. W. Harriger, M. D. Frontzek, Lijie Hao, Siqin Meng, Qingming Zhang, Gang Chen* and *Jun Zhao**
Nature 540, 559–562 (2016)
Also see “News and Views” (Nature 540, 534–535 (2016))
51. Observation of quasi-two-dimensional Dirac fermions in $ZrTe_5$
Xiang Yuan, Cheng Zhang, Yanwen Liu, Awadhesh Narayan, Chaoyu Song, Shoudong Shen, Xing Sui, Jie Xu, Haochi Yu, Zhenghua An, *Jun Zhao*, Stefano Sanvito, Huguen Yan* and Faxian Xiu*
NPG Asia Materials 8, e325 (2016)
52. Highly Anisotropic and Twofold Symmetric Superconducting Gap in Nematically Ordered $FeSe_{0.93}S_{0.07}$
H. C. Xu, X. H. Niu, D. F. Xu, J. Jiang, Q. Yao, Q. Y. Chen, Q. Song, M. Abdel-Hafiez, D. A. Chareev, A. N. Vasiliev, Q. S. Wang, H. L. Wo, *J. Zhao*, R. Peng* and D. L. Feng*
Physical Review Letters 117, 157003 (2016)
53. Enhancement of superconductivity under pressure and the magnetic phase diagram of tantalum disulfide single crystals
M. Abdel-Hafiez*, X.-M. Zhao, A. A. Kordyuk, Y.-W. Fang, B. Pan, Z. He, C.-G. Duan, *J. Zhao* and X.-J. Chen*
Scientific Reports 6, 31824 (2016)
54. Magnetic ground state of $FeSe$
Qisi Wang#, Yao Shen#, Bingying Pan#, Xiaowen Zhang, K. Ikeuchi, K. Iida, A. D. Christianson, H. C. Walker, D. T. Adroja, M. Abdel-Hafiez, Xiaojia Chen, D. A. Chareev, A. N. Vasiliev and *Jun Zhao**
Nature Communications 7, 12182 (2016)
55. Transition from sign-reversed to sign-preserved Cooper-pairing symmetry in sulfur-doped iron selenide superconductors
Qisi Wang, J. T. Park*, Yu Feng, Yao Shen, Yiqing Hao, Bingying Pan, J.W. Lynn, A. Ivanov, Songxue Chi, M. Matsuda, Huibo Cao, R. J. Birgeneau, D. V. Efremov, and *Jun Zhao**
Physical Review Letters 116, 197004 (2016)
56. Hexagonal phase stabilization and magnetic orders of multiferroic $Lu_{1-x}Sc_xFeO_3$
L. Lin, H. M. Zhang, M. F. Liu, Shoudong Shen, S. Zhou, D. Li, X. Wang, Z. B. Yan, Z. D. Zhang, *Jun Zhao*, Shuai Dong* and J.-M. Liu*
Physical Review B 93, 075146 (2016)
57. A unifying phase diagram with correlation-driven superconductor-to-insulator transition for the 122 series of iron chalcogenides
X. H. Niu, S. D. Chen, J. Jiang, Z. R. Ye, T. L. Yu, D. F. Xu, M. Xu, Y. Feng, Y. J. Yan, B. P. Xie, *J. Zhao*, D. C. Gu, L. L. Sun, Qianhui Mao, Hangdong Wang, Minghu Fang, C. J. Zhang, J. P. Hu, Z. Sun* and D. L. Feng*
Physical Review B 93, 054516 (2016)
58. Structural and magnetic phase diagram of $CrAs$ and its relationship with pressure-induced superconductivity
Yao Shen#, Qisi Wang#, Yiqing Hao#, Bingying Pan, Yu Feng, Qingzhen Huang, L. W. Harriger, J. B. Leao, Yang Zhao, R. M. Chisnell, J. W. Lynn, Huibo Cao, Jiangping Hu and *Jun Zhao**
Physical Review B 93, 060503(R) (2016)
59. Electronic structure of YFe_2Ge_2 studied by angle-resolved photoemission spectroscopy
D. F. Xu, D. W. Shen*, D. Zhu, J. Jiang, B. P. Xie, Q. S. Wang, B. Y. Pan, P. Dudin, T. K. Kim, M. Hoesch, *J. Zhao*, X. G. Wan and D. L. Feng*
Physical Review B 93, 024506 (2016)
60. Unexpected low thermal conductivity and large power factor in Dirac semimetal Cd_3As_2

Cheng Zhang, Tong Zhou, Sihang Liang, Junzhi Cao, Xiang Yuan, Yanwen Liu, Yao Shen, Qisi Wang, *Jun Zhao*, Zhongqin Yang and Faxian Xiu*

Chinese Physics B 25, 017202 (2016)

61. Strong interplay between stripe spin fluctuations, nematicity and superconductivity in FeSe
Qisi Wang, Yao Shen, Bingying Pan, Yiqing Hao, Mingwei Ma, Fang Zhou, P. Steffens, K. Schmalzl, T. R. Forrest, M. Abdel-Hafiez, Xiaojia Chen, D. A. Chareev, A. N. Vasiliev, P. Bourges, Y. Sidis, Huibo Cao and *Jun Zhao**
Nature Materials 15, 159 (2016)
62. Superconducting ground state of quasi-one-dimensional $K_2Cr_3As_3$ investigated using μ SR measurements
D. T. Adroja*, A. Bhattacharyya*, M. Telling, Yu. Feng, M. Smidman, B. Pan, *J. Zhao*, A. D. Hillier, F. L. Pratt and A. M. Strydom
Physical Review B 92, 134505 (2015)
63. Landau level splitting in Cd_3As_2 under high magnetic fields
Junzhi Cao, Sihang Liang, Cheng Zhang, Yanwen Liu, Junwei Huang, Zhao Jin, Zhi-Gang Chen, Zhijun Wang, Qisi Wang, *Jun Zhao*, Shiyan Li, Xi Dai, Jin Zou, Zhengcai Xia, Liang Li and Faxian Xiu*
Nature Communications 6, 7779 (2015)
64. Nodeless superconductivity in the presence of spin-density wave in pnictide superconductors: The case of $BaFe_{2-x}Ni_xAs_2$
Mahmoud Abdel-Hafiez, Yuanyuan Zhang, Zheng He, *Jun Zhao*, Christoph Bergmann, Cornelius Krellner, Chun-Gang Duan, Xingye Lu, Huiqian Luo, Pengcheng Dai and Xiao-Jia Chen*
Physical Review B 91, 024510 (2015)
65. Neutron Scattering Measurements of Spatially Anisotropic Magnetic Exchange Interactions in Semiconducting $K_{0.85}Fe_{1.54}Se_2$ ($T_N=280$ K)
*Jun Zhao**, Yao Shen, R. J. Birgeneau, Miao Gao, Zhong-Yi Lu, D.-H. Lee, X. Z. Lu, H. J. Xiang, D. L. Abernathy, and Y. Zhao
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66. Room-Temperature Multiferroic Hexagonal $LuFeO_3$ Films
W. Wang, *Jun Zhao*, W. Wang, Z. Gai, N. Balke, M. Chi, H. N. Lee, W. Tian, L. Zhu, X. Cheng, D. J. Keavney, J. Yi, T. Z. Ward, P. C. Snijders, H. M. Christen, W. Wu, J. Shen* and X. Xu*
Phys. Rev. Lett. 110,237601 (2013)
67. Effect of electron correlations on magnetic excitations in the isovalently doped iron-based superconductor $Ba(Fe_{1-x}Ru_x)_2As_2$
Jun Zhao, C. R. Rotundu, K. Marty, M. Matsuda, Y. Zhao, C. Setty, E. Bourret-Courchesne, Jiangping Hu, and R. J. Birgeneau
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68. Neutron-Diffraction Measurements of an Antiferromagnetic Semiconducting Phase in the Vicinity of the High-Temperature Superconducting State of $K_xFe_{2-y}Se_2$
*Jun Zhao**, Huibo Cao, E. Bourret-Courchesne, D. -H. Lee, R. J. Birgeneau
Phys. Rev. Lett. 109, 267003 (2012)
69. Neutron Scattering Study of Underdoped $Ba_{1-x}K_xFe_2As_2$ ($x=0.09$ and 0.17) Self-flux-grown Single Crystals and the Universality of the Tricritical Point
C. R. Rotundu*, W. Tian, K.C. Rule, T. R. Forrest, *Jun Zhao*, J.L. Zarestky and R.J. Birgeneau
Phys. Rev. B 85 144506 (2012)
70. Neutron Scattering Studies of spin excitations in hole-doped $Ba_{0.67}K_{0.33}Fe_2As_2$ superconductor
C. Zhang, M. Wang, H. Luo, M. Y. Wang, M. Liu, *Jun Zhao*, D. L. Abernathy, T. A. Maier, K. Marty, M. D. Lumsden, S. Chi, S. Chang, Jose A. Rodriguez-Rivera, J. W. Lynn, T. Xiang, J. Hu, & P. Dai*
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Selected Research Grants:

1. National Natural Science Foundation of China, Key Project, 12234006, Study of Hidden Orders in Correlated Systems, 2023.01-2027.12, 3 million yuan, Ongoing, Principal Investigator
2. Dongguan Songshan Lake Large Scientific Facility (Spallation Neutron Source) Open Subject, Key Subject, KFKT2022A03, Magnetic Structures and Spin Excitations in Novel Unconventional Superconductors, 2023.01-2025.12, 300,000 yuan, Ongoing, Principal Investigator
3. Ministry of Science and Technology, National Key Research and Development Program, 2022YFA1403202, Research on Strongly Coupled and Three-Dimensional Topological Superconducting Materials and Mechanisms, 2022.12.01-2027.11.31, 5.29 million yuan, Ongoing, Participant
4. Shanghai Municipal Government, Qizhi Research Institute Project, SYXF0120020503, Materials and Device Physics for Computing, 2020.07.01-2023.06.30, 15 million yuan, Completed, Participant
5. National Natural Science Foundation of China, General Program, 11874119, Study of Pairing Symmetry, Nematicity, and Magnetism in FeSe Superconductors, 2019.01.01-2022.12.31, 640,000 yuan, Completed, Principal Investigator
6. Organization Department of the Central Committee of the Communist Party of China, Thousand Talents Program Leading Talent, WR4201903, Neutron Scattering in Correlated Systems, 2019.01-Present, 800,000yuan, Ongoing, Principal Investigator

7. Shanghai Municipal Education Commission, Research Innovation Project (Major Project), 2017-01-07-00-07-E00018, Magnetic Research in Spin Frustration Systems, 2017.06.30-2021.12.31, 3 million yuan, Completed, Principal Investigator
8. Ministry of Science and Technology, National Key Research and Development Program, 2016YFA0300203, Microscopic Mechanisms of New Quantum Orders in Correlated Systems, 2016.01.01-2020.12.31, 10.6 million yuan, Completed, Participant
9. Ministry of Science and Technology, National Basic Research Program of China (973 Program), 2015CB921302, Study of Magnetic Interactions in High Orbital Angular Momentum Electron Complex Systems, 2015.01.01-2019.08.31, 5.34 million yuan, Completed, Principal Investigator
10. National Natural Science Foundation of China, Major Research Plan, 91421106, Neutron Scattering Study of CrAs Superconductors, 2015.01.01-2017.12.31, 1 million yuan, Completed, Principal Investigator
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12. Shanghai Municipal Science and Technology Commission, Talent Program, 13PJ1401100, Neutron Scattering Study of Transition Metal Doped Iron-Based Superconductors, 2013.08.31-2015.09.01, 200,000 yuan, Completed, Principal Investigator
13. Thousand talent program, 2012-2015 Neutron scattering study of strongly correlated systems, 3 million yuan, Completed, Principal Investigator