Qi Song

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Education

2017-	Visiting Student of Physics **Massachusetts Institute of Technology**, Cambridge
2013-	PhD candidate of Condensed Matter Physics **Fudan University**, shanghai
2009-2013	Bachelor of Physics(Rank:2/66) **Tongji University**, Shanghai

Awards:

2016	**Leading outstanding students (1/340),** Fudan University
2016	**2011 center Scholarship for Outstanding graduate Students, 2nd Prize**
2013-2015	**Scholarship for Outstanding Students, 2nd Prize,** Fudan University
2013	**Outstanding graduates of Shanghai**
2009-2012	**Outstanding Student of Tongji University**
2010-2011	**National Scholarship**
2010-2011	**Scholarship of Tongji University, 1st Prize**
2009-2010	**"Guanghua Scholarship" of Tongji University**
2009-2010	**Scholarship of Tongji University, 2nd Prize**

Research Interest and Experience

2012-2013	Project: single crystal growth of superconducting materials and their **electronic-structure** study by ARPES. Skills: **ARPES**, XRD, Laue, SQUID, PPMS…
2014-	Project: Electronic structures of **FeSe** and **Oxide thin films** Grown FeSe, La(Sr)TiO3, isotopic (Nb)SrTiO3, BaTiO3, LaNiO3, etc.
2017-	Raman Scattering and REXS study of FeSe thin films.

Experience:

2016.12	3th five universities union conference, Beijing, China (presentation)
2016.10	International workshop on oxide electronics, Nanjing, China (post presentation)
2016.05	SCES, Hangzhou, China (poster presentation)
2016.03	March meeting of APS, Baltimore, US (poster presentation)
2015.06	Reunion Worshop, shanghai, China
2015.05	Annual Meeting of Department of Physics (poster presentation)
2015.04	Heavy fermion workshop, Hangzhou, China
2015.02	Quantum Material Symposium, Muju, Korea (poster presentation)
2014.07	Physics summer school in Tsinghua University, Beijing
2014.05	Annual Meeting of Department of Physics
2012.11	11th A3 workshop, shanghai, China

Beamtime:

2017.07	Diamond light source, Oxford, UK
2016.09	Advanced light source, CA, US
2016.03	Stanford Synchrotron Radiation Lightsource, CA, US
2015.06	National Synchrotron Radiation Laboratory, Hefei, China

Publications

1, **Q. Song**$^{+}$, T. L. Yu^{+}, X. Lou, B. P. Xie, H. C. Xu, C. H. P. Wen, Q. Yao, S. Y. Zhang, X. T. Zhu, J. D. Guo, R. Peng, D. L. Feng, Phonon-enhanced superconductivity at the FeSe/SrTiO3 interface, arXiv:1710.07057, 2017

2, **Q. Song**, R. Peng, H. C. Xu and D. L. Feng, The spatial distribution of two dimensional electron gas at the $LaTiO_3$ /$KTaO_3$ interface, J. Phys.: Condens. Matter 29 (2017) 315001.

3, **Q. Song**, Y. J. Yan, Z. R. Ye, M. Q. Ren, D. F. Xu, S. Y. Tan, X. H. Niu, B. P. Xie, T. Zhang, R. Peng, H. C. Xu, J. Jiang* and D. L. Feng*, Electronic structure of the titanium-based oxypnictide superconductor $Ba_{0.95}Na_{0.05}Ti_2Sb_2O$ and direct observation of its charge density wave order, Physical Review B, 93, 024508, 2016

4, Zuocheng Zhang*, Yihua Wang*，**Qi Song***，Chang Liu, Rui Peng, K. A. Moler, Donglai Feng, Yayu Wang, Onset of the Meissner effect at 65 K in FeSe thin film grown on Nb-doped SrTiO3 substrate, Chinese science Bulletin, 60(14), 2015.

5, P. K. Biswas, Z. Salman, **Q. Song**, R. Peng, J. Zhang, L. Shu, D.L. Feng, T. Prokscha, A. Suter, E. Morenzoni, Direct evidence of nodeless clean superconductivity and determination of the superfluid density in single-layer FeSe grown on SrTiO3, arXiv: 1602.02580, 2016

6, C. Wen, H. Xu, C. Chen, Z. Huang, X. Lou, Y. Pu, **Q. Song**, B. Xie, M. Abdel-Hafiez, D. Chareev, A. Vasiliev, R. Peng, and Donglai Feng, Anomalous correlation effects and unique phase diagram of electron-doped FeSe revealed by photoemission spectroscopy, Nature Comm., 7, 10840, 2016

7, X. Niu, R. Peng, H. Xu, Y. Yan, J. Jiang, D. Xu, T. Yu**, Q. Song**, Z. C. Huang, Y. X. Wang, B. P. Xie, X. F. Lu, N. Z. Wang, X. H. Chen, Z. Sun, and D. L. Feng, Surface electronic structure and isotropic superconducting gap in (Li0.8Fe0.2)OHFeSe, Physical Review B 92, 060504, (2015)

8, R. Peng, H. Xu, S. Tan, H. Cao, M. Xia, X. Shen, Z. Huang, C. Wen, **Q. Song**, T. Zhang, B. P. Xie, X. G. Gong, D. L. Feng, Tuning the band structure and superconductivity in single-layer FeSe by interface engineering, Nature Comm. 5, 5044 (2014)

9, S. Y. Tan, Y. Fang, D. H. Xie, W. Feng, C. H. P. Wen, **Q. Song**, W. Zhang, Q. Y. Chen, Y. Zhang, L. Z. Luo, B. P. Xie, D. L. Feng, X. C., Observation of Dirac Cone Band Dispersion in FeSe Thin Films by Photoemission Spectroscopy，Physical Review B 93, 104513(2016)

10, Z. C. Huang, Y. J. Pu, H. C. Xu, D. F. Xu, **Q. Song**, X. Lou, C. H. P. Lou, R. Peng and D. L. Feng,

Electronic Structure and superconductivity of Single-layer FeSe on Nb:SrTiO3/LaAlO3 with varied tensile strain. 2D materials, 3,1(2016)

11, Y.J. Pu, Z. C. Huang, H. C. Xu, D. F. Xu, **Q. Song**, C. H. P. Wen, R. Peng and D.L. Feng, Temperature-induced orbital selective localization and coherent-incoherent crossoer in single-layer FeSe/Nb:BaTiO3/KTaO3.(accepted online)

12, 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, Highly Anisotropic and Twofold Symmetric Superconducting Gap in Nematically Ordered FeSe0.93S0.07, Phys. Rev. Lett. 117, 157003.(2016)

13, X. H. Niu, D. F. Xu, Y. H. Bai, **Q. Song**, X. P. Shen, B. P. Xie, Z. Sun, Y. B. Huang, D. C. Peets, and D. L. Feng, Presence of exotic electronic surface states in LaBi and LaSb, Phys. Rev. B 94, 165163(2016).

Skill and Interest

Language: English, Chinese(native language)
Software: Igor, Illustrator, Premiere, Photoshop
Interests: Chinese painting, Violin, Dance.