

Shengshan Qin (秦盛山)

CONTACT INFORMATION

Kavli Institute for Theoretical Sciences (KITS)
University of Chinese Academy of Sciences (UCAS)
Beijing, 100049, China

Phone: +86 18612464206
E-mail: qinshengshan@iphy.ac.cn

EDUCATION

09/2007 – 07/2011

Bachelor of Science in Physics
School of Physics and Technology, Wuhan University, China

09/2011 – 12/2017

Ph. D. in theoretical Physics
Institute of Physics, Chinese Academy of Sciences, China
Supervisor: Prof. Jiangping Hu

01/2018 – present

Postdoctoral Fellow in Kavli Institute for Theoretical Sciences
University of Chinese Academy of Sciences, China
Supervisor: Prof. Fu-chun Zhang and Prof. Jiangping Hu

RESEARCH AREAS and HIGHLIGHTS

My research focuses on the theoretical study in condensed matter physics, including novel topological systems (topological insulators, semimetal and superconductors), and unconventional superconductivity. The selected papers are listed as follows:

REFERENCES

- Prof. Jiangping Hu
Email: jphu@iphy.ac.cn
Affiliation: Institute of Physics, Chinese Academy of Sciences, Beijing 100190, China
- Prof. Fu-chun Zhang
Email: fuchun@ucas.ac.cn
Affiliation: Kavli Institute for Theoretical Sciences
University of Chinese Academy of Sciences, Beijing, 100049, China
- Prof. Chen Fang
Email: cfang@iphy.ac.cn
Affiliation: Institute of Physics, Chinese Academy of Sciences, Beijing 100190, China

PUBLICATIONS AND PREPRINTS

- [1] Congcong Le, Kun Jiang, Yinxiang Li, **Shengshan Qin**, Ziqiang Wang, Fuchun Zhang, Jiangping Hu, *Electronic structure and superconductivity in unconventional cuprates $Ba_2CuO_{3+\delta}$* , arXiv:1909.12620.
- [2] Yinxiang Li, Xianxin Wu, Yuhao Gu, Congcong Le, **Shengshan Qin**, Ronny Thomale, Jiangping Hu, *Topological superconductivity in Ni-based transition-metal trichalcogenide superconductors*, arXiv:1906.05999.
- [3] **Shengshan Qin**, Lunhui Hu, Congcong Le, Jinfeng Zeng, Fu-chun Zhang, Chen Fang, Jiangping Hu, *Quasi-1D topological nodal vortex line phase in doped superconducting 3D Dirac Semimetals*, Phys. Rev. Lett. **123**, 027003 (2019). doi:10.1103/PhysRevLett.123.027003
- [4] **Shengshan Qin**, Lunhui Hu, Xianxin Wu, Xia Dai, Chen Fang, Fu-chun Zhang, Jiangping Hu, *Topological Vortex Phase Transitions in Iron-Based Superconductors*, Sci. Bull. **64**, 1207 (2019). doi:10.1016/j.scib.2019.07.011
- [5] Zhesen Yang, **Shengshan Qin**, Qiang Zhang, Chen Fang, Jiangping Hu, *i-Josephson Junction as Topological Superconductor*, Phys. Rev. B **98**, 104515 (2018). doi:10.1103/PhysRevB.98.104515
- [6] Congcong Le, Xianxin Wu*, **Shengshan Qin**, Yinxiang Li, Ronny Thomale, Fuchun Zhang, Jiangping Hu, *β -CuI: a Dirac semimetal without surface Fermi arcs*, PNAS **14**, 8311-8315 (2018). doi:10.1073/pnas.1803599115
- [7] **Shengshan Qin**, Congcong Le, Xianxin Wu, Jiangping Hu, *Topological critical materials of ternary compounds*, Journal of Physics and Chemistry of Solids **128**, 218-224 (2019). doi:10.1016/j.jpics.2017.12.006
- [8] **Shengshan Qin**, Yinxiang Li, Qiang Zhang, Congcong Le, Jiangping Hu, *Theoretical studies of superconductivity in doped BaCoSO*, Front. Phys. **13**, 137502 (2018). doi:10.1007/s11467-018-0745-7
- [9] Jinfeng Zeng, **Shengshan Qin**, Congcong Le, Jiangping Hu, *Magnetism and superconductivity in the layered hexagonal transition metal pnictides*, Phys. Rev. B **96**, 174506 (2017). doi:10.1103/PhysRevB.96.174506
- [10] Yinxiang Li, Xinloong Han, **Shengshan Qin**, Congcong Le, Qiang-Hua Wang, Jiangping Hu, *Robust d-wave pairing symmetry in multi-orbital cobalt high temperature superconductors*, Phys. Rev. B **96**, 024506 (2017). doi:10.1103/PhysRevB.96.024506
- [11] Congcong le, **Shengshan Qin**, Jiangping Hu, *Electronic Physics and Possible Superconductivity in Layered Orthorhombic Cobalt Oxichalcogenides*, Science Bulletin **62**, 563 (2017). doi:10.1016/j.scib.2017.03.023
- [12] Congcong Le, **Shengshan Qin**, Xianxin Wu, Xia Dai, Peiyuan Fu, Jiangping Hu, *Three-dimensional Critical Dirac semimetal in $KMgBi$* , Phys. Rev. B **96**, 115121 (2017). doi:10.1103/PhysRevB.96.115121
- [13] Xia Dai, Congcong Le, Xianxin Wu, **Shengshan Qin**, Zhiping Lin, Jiangping Hu, *Topological phase in non-centrosymmetric material $NaSnBi$* , Chin. Phys. Lett. **33**, 127301 (2016). doi:10.1088/0256-307X/33/12/127301
- [14] X. X. Wu, F. Yang, **S. S. Qin**, H. Fan, J. P. Hu, *Experimental consequences of p_z -wave spin triplet superconductivity in $A_2Cr_3As_3$* , arXiv:1507.07451 (2015).
- [15] X. X. Wu, **S. S. Qin**, Y. Liang, H. Fan, J. P. Hu, *Topological Characters in $Fe(Te_{1-x}Se_x)$ thin films*, Phys. Rev. B **93**, 115129 (2016). doi:10.1103/PhysRevB.93.115129.

- [16] X. X. Wu, **S. S. Qin**, Y. Liang, C. C. Le, H. Fan, J. P. Hu, *CaFeAs₂: a Staggered Inter-calculation of Quantum Spin Hall and High Temperature Superconductivity*, Phys. Rev. B **91**, 081111(R)(2015). doi:10.1103/PhysRevB.91.081111
- [17] X. X. Wu, C. C. Le, Y. Liang, **S. S. Qin**, H. Fan, J. P. Hu, *The effect of As-Chain layers in CaFeAs₂*, Phys. Rev. B **89**, 205102 (2014). doi:10.1103/PhysRevB.89.205102

Last updated: December 11, 2019