

Curriculum Vitae

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Education

10.1999-10.2003: Ph.D, Max-Planck Institute for Chemical Physics of Solids, Germany.
Dr. rer. Nat. in Physics, Technische Universität Dresden, October 6, 2003.

09.1996-12.1998: Graduate, Xiangtan University, Hunan, China.
M. Sc. in Physics, January 25, 1999

09.1992-06.1996: Undergraduate, Xiangtan University, Hunan, China.
B. S. in Physics, June 20, 1996.

Work Experience

04.2012 - present: Executive Deputy Director, Center for Correlated Matter, Zhejiang University.

08.2008 - present: Qishi Professor, Department of Physics, Zhejiang University.

05.2007 - 08. 2008: Director's Postdoctoral Fellow, Los Alamos National Laboratory.

08.2004 - 05.2007: Postdoctoral research associate, Department of Physics, UIUC.

10.1999 - 08.2004: Research assistant, MPI for Chemical Physics of Solids.

Prizes and Honors

2023: Young and Middle-aged Experts with Outstanding Contributions of Zhejiang Province

2022: Ye Qi-Sun Physics Prize, Chinese Physical Society.

2021: American Physical Society Fellow

2008: Chang-Jiang Scholar Professorship, Ministry of Education, China.

2006: Director's Postdoctoral Fellowship, Los Alamos National Laboratory.

2004-2007: ICAM Postdoctoral Fellowship.

Professional Services

1. Editorial Board Member: Reviews in Physics (Elsevier); Frontiers in Electronic Materials; Science China (MPA); Chinese Physics Letters; Physics, Low Temperature Physics; High Pressure Physics.

2. Committee Member:

- High Pressure Physics Division, Chinese Physical Society

- Low Temperature Physics Division, Chinese Physical Society.
3. Member of International Advisory and/ or Program Committee:
- International Conference on Strongly Correlated Electron System (SCES).
 - International Conference on Materials and Mechanism of Superconductivity (M2S);

Conferences Organizations

1. 2014-present: Heavy Fermion Forum (annual meeting), Co-Chair.
2. 2019: 2nd Zhejiang Workshop on Correlated Matter (International), Chair.
3. 2017: 1st Zhejiang Workshop on Correlated Matter (International), Chair.
4. 2016: International Conference on Strongly Correlated Electron Systems (SCES 2016), Co-Chair.
5. 2015: International Workshop on Heavy Fermions and Quantum Phase Transitions, Co-Chair.
6. 2013: Sino-German Workshop on Kondo and Mott Physics in Correlated Matter, Co-Chair.
7. 2012: Sino-German Bilateral Workshop on Emergent Phases in Correlated and Topological Matter, Co-Chair.
8. 2010: Hangzhou Workshop on Quantum Matter, Co-Chair.

List of publications

Published over 180 peer reviewed articles, including 3 in Nature, 1 in Science, 2 in PNAS, 15 in PRL and 2 in Nature Communications, as well as 7 invited review articles with 2 in Rep. Prog. Phys.. The total citation is over 5000 times.

1. Su Chen, Yingcai Qian, Xiaoli Huang, Wuhao Chen, Jianning Guo, Kexin Zhang, Jinglei Zhang, **Huiqiu Yuan**, Tian Cui*, High-temperature superconductivity up to 223 K in the Al stabilized metastable hexagonal lanthanum superhydride, *National Science Review*, 11, nwad107 (2024).
2. Shuaishuai Luo, Yongkang Xu, Feng Du, Lin Yang, Yuxin Chen, Chao Cao, Yu Song* and **Huiqiu Yuan***, Colossal magnetoresistance and topological phase transition in EuZn_2As_2 , *Phys. Rev. B* 108, 205140 (2023).
3. Yimin Wan , Erjian Cheng, Yuxin Chen, Chengcheng Zhao, Chengpeng Tu, Dongzhe Dai , Xiaofan Yang, Lu Xin, Wu Xie, **Huiqiu Yuan***, and Shiyan Li*, Ultralow-temperature heat transport study of noncentrosymmetric superconductor CaPtAs , *Chin. Phys. B* 32, 127403 (2023).
4. M. Smidman*, O. Stockert*, E. M. Nica, Y. Liu, **H. Q. Yuan***, Q. M. Si*, F. Steglich*, *Colloquium: Unconventional fully gapped superconductivity in the heavy-fermion metal CeCu_2Si_2* , *Rev. Mod. Phys.* 95, 031002 (2023).
5. Yuan Fang, Zhongzheng Wu, Guowei Yang, Yuwei Zhang, Weifan Zhu, Yi Wu, Chunyu Guo, Yuke Li, Huiqiu Yuan, Jian-Xin Zhu, Yang Liu, and Chao Cao, Valence transition and

- termination-dependent surface states in the topological Kondo semimetal YbPtBi, *Phys. Rev. B* 108, 125110 (2023).
6. Y. N. Zhang, D. J. Su, Z. Y. Shan, Z. H. Yang, J. W. Zhang, R. Li, M. Smidman, and **H. Q. Yuan***, Superconductivity of cerium at quasihydrostatic pressure up to 54 GPa, *Phys. Rev. B* 108, 094502 (2023).
 7. Kangqiao Cheng, Shuo Zou, Huanpeng Bu, Jiawen Zhang, Shijie Song, Hanjie Guo*, **Huiqiu Yuan***, and Yongkang Luo*, Synthesis and physical properties of Ce₂Rh_{3+δ}Sb₄ single crystals, *Phys. Rev. Materials* 7, 084404 (2023).
 8. Peng Li, Huiqing Ye, Yong Hu, Yuan Fang, Zhiguang Xiao, Zhongzheng Wu, Zhaoyang Shan, Ravi P. Singh, Geetha Balakrishnan, Dawei Shen, Yi-feng Yang, Chao Cao, Nicholas C. Plumb, Michael Smidman, Ming Shi, Johann Kroha, **Huiqiu Yuan***, Frank Steglich, and Yang Liu*, Photoemission signature of the competition between magnetic order and Kondo effect in CeCoGe₃, *Phys. Rev. B* 107, L201104 (2023).
 9. Lingyun Tang, Zhongquan Mao, Chutian Wang, Qi Fu, Chen Wang, Yichi Zhang, Jingyi Shen, Yuefeng Yin, Bin Shen, Dayong Tan, Qian Li, Yonggang Wang, Nikhil V. Medhekar, Jie Wu, Huiqiu Yuan, Yanchun Li*, Michael S. Fuhrer*, Changxi Zheng*, Giant piezoresistivity in a van der Waals material induced by intralayer atomic motions. *Nat. Commun.* 14, 1519 (2023).
 10. Yuxin Chen, Yongjun Zhang, Rui Li, Hang Su, Zhaoyang Shan, Michael Smidman*, and **Huiqiu Yuan***, Multiple magnetic phases and magnetization plateaus in TbRh₆Ge₄, *Phys. Rev. B* 107, 094414 (2023).
 11. Dongting Zhang, Chufan Chen, Lichang Yin, Yan'En Huang, Fengrui Shi, Yi Liu, Xiaofeng Xu, **Huiqiu Yuan**, and Xin Lu*, Superconducting gap evolution of kagome metal CsV₃Sb₅ under pressure, *Sci. China-Phys. Mech. Astron.* 66, 227411(2023).
 12. Weiyin Duan, Jiawen Zhang, Rohit Kumar, Hang Su, Yuwei Zhou, Zhiyong Nie, Ye Chen, Michael Smidman, Chao Cao, Yu Song*, and **Huiqiu Yuan***, Nodeless superconductivity in the topological nodal-line semimetal CaSb₂, *Phys. Rev. B* 106, 214521 (2023).
 13. Chufan Chen, Dongting Zhang, Rohit Kumar, Yanan Zhang, Ge Ye, Lichang Yin, Jiawen Zhang, Huiqiu Yuan, Chao Cao, and Xin Lu, Tip-induced superconductivity enhancement in single-crystalline PdSb by point-contact spectroscopy, *Phys. Rev. B* 106, 174520 (2022).
 14. Weiyin Duan, Zhiyong Nie, Dayu Yan, Hang Su, Yuxin Chen, Ye Chen, Youguo Shi, Yu Song and **Huiqiu Yuan**, Nodeless superconductivity in topologically nontrivial materials HfRuP and ZrRuAs, *J. Phys.: Condens. Matter* 34 455601 (2022).
 15. Hang Su, Feng Du, Rui Li, Shuaishuai Luo, Yuxuan Chen, Jiyong Liu, Ye Chen, Chao Cao, Michael Smidman*, **Huiqiu Yuan***, Structural phase transitions and superconductivity in the Heusler intermetallics XPd₂Sn (X = Ti, Zr, Hf), *Phys. Rev. B* 106, 134517 (2022).
 16. Rohit Kumar, Shuai-Shuai Luo, Feng Du, Hang Su, Jiawen Zhang, Chao Cao and **H Q Yuan**, Superconductivity in non-centrosymmetric ZrNiAl and HfRhSn-type compounds, *J. Phys.: Condens. Matter* 34 435701(2022).
 17. Zhaoyang Shan, Pabitra K. Biswas, Sudeep K. Ghosh, T. Tula, Adrian D. Hillier, Devashibhai Adroja, Stephen Cottrell, Guang-Han Cao, Yi Liu, Xiaofeng Xu, Yu Song, **Huiqiu Yuan**, and Michael Smidman, Muon spin relaxation study of the layered kagome superconductor CsV₃Sb₅, *Phys. Rev. Research* 4, 033145 (2022).
 18. W. Xie, F. Du, X. Y. Zheng, H. Su, Z. Y. Nie, B. Q. Liu, Y. H. Xia, T. Shang, C. Cao, M. Smidman, T. Takabatake, and **H. Q. Yuan**, W. Xie, F. Du, X. Y. Zheng, H. Su, Z. Y. Nie, B. Q.

- Liu, Y. H. Xia, T. Shang, C. Cao, M. Smidman, T. Takabatake, and H. Q. Yuan, *Phys. Rev. B* **106**, 075132 (2022)
19. Y. J. Zhang, Z. Y. Nie, R. Li, Y. C. Li, D. L. Yang, B. Shen, Y. Chen, F. Du, S. S. Luo, H. Su, R. Shi, S. Y. Wang, M. Nicklas, F. Steglich, M. Smidman, and **H. Q. Yuan**, Suppression of ferromagnetism and influence of disorder in silicon-substituted CeRh_6Ge_4 , *Phys. Rev. B* **106**, 054409 (2022).
 20. Y. E. Huang, F. Wu, A. Wang, Y. Chen, L. Jiao, M. Smidman and **H. Q. Yuan**, Pressure Evolution of the Magnetism and Fermi Surface of YbPtBi Probed by a Tunnel Diode Oscillator Based Method, *Chinese Phys. Lett.* **39** 097101 (2022).
 21. Feng Du, Rui Li, Shuaishuai Luo, Yu Gong, Yanchun Li, Sheng Jiang, Brenden R. Ortiz, Yi Liu, Xiaofeng Xu, Stephen D. Wilson, Chao Cao, Yu Song, and **Huiqiu Yuan**, Superconductivity modulated by structural phase transitions in pressurized vanadium-based kagome metals, *Phys. Rev. B* **106**, 024516 (2022).
 22. Feng Du, Lin Yang, Zhiyong Nie, Ninghua Wu, Yong Li, Shuaishuai Luo, Ye Chen, Dajun Su, Michael Smidman, Youguo Shi, Chao Cao, Frank Steglich, Yu Song & **Huiqiu Yuan**, Consecutive topological phase transitions and colossal magnetoresistance in a magnetic topological semimetal, *npj Quantum Materials* **7**, 65 (2022).
 23. Z. Y. Nie, J. W. Shu, A. Wang, H. Su, W. Y. Duan, A. D. Hillier, D. T. Adroja, P. K. Biswas, T. Takabatake, M. Smidman, and **H. Q. Yuan**, Nodeless superconductivity in noncentrosymmetric LaRhSn , *Phys. Rev. B* **105**, 134523 (2022).
 24. T. Shang, D. Tay, H. Su, **H. Q. Yuan**, and T. Shiroka, Evidence of fully gapped superconductivity in NbReSi : A combined μ SR and NMR study, *Phys. Rev. B* **105**, 144506 (2022).
 25. Tian Shang, Sudeep K. Ghosh, Michael Smidman, Dariusz Jakub Gawryluk, Christopher Baines, An Wang, Wu Xie, Ye Chen, Mukkattu O. Ajeesh, Michael Nicklas, Ekaterina Pomjakushina, Marisa Medarde, Ming Shi, James F. Annett, **Huiqiu Yuan**, Jorge Quintanilla & Toni Shiroka, Spin-triplet superconductivity in Weyl nodal-line semimetals, *npj Quantum Materials* **7** (2022).
 26. Du, F, Luo, SS, Li, R, Ortiz, BR, Chen, Y, Wilson, SD, Song, Y, **Yuan, HQ**, Evolution of superconductivity and charge order in pressurized RbV_3Sb_5 , *Chinese Phys. B* **31**, 017404 (2022).
 27. H. Q. Ye, T. Le, H. Su, Y. N. Zhang, S. S. Luo, M. J. Gutmann, **H. Q. Yuan**, and M. Smidman*, Magnetic properties of the layered heavy-fermion antiferromagnet CePdGa_6 , *Phys. Rev. B* **105**, 014405 (2022).
 28. Feng Du, Shuaishuai Luo, Rui Li, Brenden R. Ortiz, Ye Chen, Stephen D. Wilson, Yu Song* and **Huiqiu Yuan***, Evolution of superconductivity and charge order in pressurized RbV_3Sb_5 , *Chin. Phys. B* **31**, 017404 (2022).
 29. H. Su, T. Shang*, F. Du, C. F. Chen, H. Q. Ye, X. Lu, C. Cao, M. Smidman, and **H. Q. Yuan***, NbReSi : A noncentrosymmetric superconductor with large upper critical field, *Phys. Rev. Materials* **5**, 114802 (2021).
 30. W. Xie, S. S. Luo, H. Su, X. Y. Zheng, Z. Y. Nie, M. Smidman*, T. Takabatake, and **H. Q. Yuan***, Complex magnetic phase diagram in noncentrosymmetric EuPtAs , *Phys. Rev. B* **104**, 174425 (2021).

31. Lichang Yin, Dongting Zhang, Chufan Chen, Ge Ye, Fanghang Yu, Brenden R. Ortiz, Shuaishuai Luo, Weiyin Duan, Hang Su, Jianjun Ying, Stephen D. Wilson, Xianhui Chen, **Huiqiu Yuan**, Yu Song*, and Xin Lu*, Strain-sensitive superconductivity in the kagome metals KV_3Sb_5 and CsV_3Sb_5 probed by point-contact spectroscopy, *Phys. Rev. B* **104**, 174507 (2021).
32. J. W. Shu, D. T. Adroja, A. D. Hillier, Y. J. Zhang, Y. X. Chen, B. Shen, F. Orlandi, H. C. Walker, Y. Liu, C. Cao, F. Steglich, **H. Q. Yuan**, and M. Smidman*, Magnetic order and crystalline electric field excitations of the quantum critical heavy-fermion ferromagnet $CeRh_6Ge_4$, *Phys. Rev. B* **104**, L140411 (2021).
33. Weiyin Duan, Zhiyong Nie, Shuaishuai Luo, Fanghang Yu, Brenden R. Ortiz, Lichang Yin, Hang Su, Feng Du, An Wang, Ye Chen, Xin Lu, Jianjun Ying, Stephen D. Wilson, Xianhui Chen, Yu Song*, and **Huiqiu Yuan***, Nodeless superconductivity in the kagome metal CsV_3Sb_5 , *Sci. China-Phys. Mech. Astron.* **64**, 107462 (2021).
34. Jia-Cheng Xu, Hang Su, Rohit Kumar, Shuai-Shuai Luo, Zhi-Yong Nie, An Wang, Feng Du, Rui Li, Michael Smidman, and **Hui-Qiu Yuan***, Ce-Site Dilution in the Ferromagnetic Kondo Lattice $CeRh_6Ge_4$, *Chinese Phys. Lett.* **38**, 087101 (2021).
35. Zhongzheng Wu, Yuan Fang, Hang Su, Wu Xie, Peng Li, Yi Wu, Yaobo Huang, Dawei Shen, Balasubramanian Thiagarajan, Johan Adell, Chao Cao, **Huiqiu Yuan**, Frank Steglich, and Yang Liu*, Revealing the Heavy Quasiparticles in the Heavy-Fermion Superconductor $CeCu_2Si_2$, *Phys. Rev. Lett.* **127**, 067002 (2021).
36. An Wang, Feng Du, Yongjun Zhang, David Graf, Bin Shen, Ye Chen, Yang Liu, Michael Smidman, Chao Cao, Frank Steglich, **Huiqiu Yuan***, Localized 4f-electrons in the quantum critical heavy fermion ferromagnet $CeRh_6Ge_4$, *Science Bulletin*, 66, 14 (2021).
37. H. Su, Z. Y. Nie, F. Du, S. S. Luo, A. Wang, Y. J. Zhang, Y. Chen, P. K. Biswas, D. T. Adroja, C. Cao, M. Smidman*, and **H. Q. Yuan***, Fully gapped superconductivity with preserved time-reversal symmetry in noncentrosymmetric $LaPdIn$, *Phys. Rev. B* **104**, 024505 (2021).
38. Feng Du, Shuaishuai Luo, Brenden R. Ortiz, Ye Chen, Weiyin Duan, Dongting Zhang, Xin Lu, Stephen D. Wilson, Yu Song*, **Huiqiu Yuan***, Pressure-induced double superconducting domes and charge instability in the kagome metal KV_3Sb_5 , *Phys. Rev. B* **103**, L220504 (2021).
39. Dongting Zhang, Tian Le, Baijiang Lv, Lichang Yin, Chufan Chen, Zhiyong Nie, Dajun Su, **Huiqiu Yuan**, Zhu-An Xu, Xin Lu*, Full superconducting gap and type-I to type-II superconductivity transition in single crystalline $NbGe_2$, *Phys. Rev. B* **103**, 214508 (2021).
40. T. Shang*, W. Xie, J. Z. Zhao, Y. Chen, D. J. Gawryluk, M. Medarde, M. Shi, **H. Q. Yuan**, E. Pomjakushina, and T. Shiroka, Multigap, superconductivity in centrosymmetric and noncentrosymmetric rhenium-boron superconductors, *Phys. Rev. B* **103**, 184517 (2021).
41. Yi Wu, Yongjun Zhang, Feng Du, Bin Shen, Hao Zheng, Yuan Fang, Michael Smidman, Chao Cao, Frank Steglich, **Huiqiu Yuan***, Jonathan D. Denlinger, and Yang Liu*, Anisotropic c – f Hybridization in the Ferromagnetic Quantum Critical Metal $CeRh_6Ge_4$, *Phys. Rev. Lett.* **126**, 216406 (2021).
42. Y. H. Pei, Y. J. Zhang, Z. X. Wei, Y. X. Chen, K. Hu, Yi-feng Yang, **H. Q. Yuan*** and J. Qi*, Unveiling the hybridization process in a quantum critical ferromagnet by ultrafast optical spectroscopy, *Phys. Rev. B* **103**, L180409 (2021).
43. Yi Wu, Yuan Fang, Peng Li, Zhiguang Xiao, Hao Zheng, **Huiqiu Yuan**, Chao Cao, Yi-feng Yang * and Yang Liu*, Bandwidth-control orbital-selective delocalization of 4f electrons in epitaxial Ce films, *Nat. Commun.* **12**, 2520 (2021).

44. Yuan Fang, Ding Wang, Peng Li, Hang Su, Tian Le, Yi Wu, Guo-Wei Yang, Hua-Li Zhang, Zhi-Guang Xiao, Yan-Qiu Sun, Si-Yuan Hong, Yan-Wu Xie, Huan-Hua Wang, Chao Cao, Xin Lu, **Hui-Qiu Yuan** and Yang Liu*, Growth, electronic structure and superconductivity of ultrathin epitaxial CoSi₂ films, *J. Phys.: Condens. Matter.* **33**, 155501 (2021).
45. Z.Y.Nie, L. C.Yin, A. Thamizhavel, A. Wang, B. Shen, L. Q. Che, F. Du, Z. Hossain, M. Smidman, X. Lu, **H. Q. Yuan***, Nodeless superconductivity in the charge density wave superconductor LaPt₂Si₂, *Phys. Rev. B* **103**, 014515 (2021).
46. Sudeep Kumar Ghosh*, Michael Smidman*, Tian Shang, James F. Annett, Adrian Hillier, Jorge Quintanilla and **Huiqiu Yuan***, Recent progress on superconductors with time-reversal symmetry breaking, *J. Phys. Condens. Matter.* **33**, 033001 (2021).
47. A. Wang, Z. Y. Nie, F. Du, G. M. Pang, N. Kase, J. Akimitsu, Y. Chen, M. J. Gutmann, D. T. Adroja, R. S. Perry, C. Cao, M. Smidman, **H. Q. Yuan***, Nodeless superconductivity in Lu_{5-x}Rh₆Sn_{18+x} with broken time reversal symmetry, *Phys. Rev. B* **103**, 024503 (2020)
48. F. Du, H. Su, S. S. Luo, B. Shen, Z. Y. Nie, L. C. Yin, Y. Chen, R. Li, M. Smidman, **H. Q. Yuan***, Interplay between charge density wave order and superconductivity in LaAuSb₂ under pressure, *Phys. Rev. B* **102**, 144510 (2020).
49. T. Shang, W. Xie, D. J. Gawryluk, R. Khasanov, J. Z. Zhao, M. Medarde, M. Shi, **H. Q. Yuan**, E. Pomjakushina, T. Shiroka, Multigap superconductivity in the Mo₅PB₂ boron-phosphorus compound, *New J. Phys.* **22**, 093016 (2020).
50. T. Le, Y. Sun, H. K. Jin, L. Q. Che, LQ; L. C. Yin, J. Li, J; G. M. Pang, C. Q. Xu, L. X. Zhao, S. Kittaka, T. Sakakibara, K. Machida, R. Sankar, **H. Q. Yuan**, G. F. Chen, X. F. Xu, S. Y. Li, Y. Zhou, X. Lu, Evidence for nematic superconductivity of topological surface states in PbTaSe₂, *Science Bulletin*, **65**, 1349(2020).
51. P. R. Zhang, **H. Q. Yuan*** and C. Cao*, Electron-phonon coupling and nontrivial band topology in noncentrosymmetric superconductors LaNiSi, LaPtSi, and LaPtGe, *Phys. Rev. B* **101**, 245145 (2020).
52. T. Shang*, M. Smidman, A. Wang, L.-J. Chang, C. Baines, M. K. Lee, Z. Y. Nie, G. M. Pang, W. Xie, W. B. Jiang, M. Shi, M. Medarde, T. Shiroka, and **H. Q. Yuan***, Simultaneous Nodal Superconductivity and Time-Reversal Symmetry Breaking in the Noncentrosymmetric Superconductor CaPtAs, *Phys. Rev. Lett.* **124**, 207001 (2020).
53. B. Shen, F. Du, R. Li, A. Thamizhavel, M. Smidman, Z. Y. Nie, S. S. Luo, T. Le, Z. Hossain, and **H. Q. Yuan***, Evolution of charge density wave order and superconductivity under pressure in LaPt₂Si₂, *Phys. Rev. B* **101**, 144501 (2020).
54. Bin Shen, Yongjun Zhang, Yashar Komijani, Michael Nicklas, Robert Borth, An Wang, Ye Chen, Zhiyong Nie, Rui Li, Xin Lu, Hanoh Lee, Michael Smidman, Frank Steglich, Piers Coleman, **Huiqiu Yuan***, Strange-metal behaviour in a pure ferromagnetic Kondo lattice, *Nature* **579**, 51 (2020).
55. Jian Chen*, An Wang, Guiming Pang, Hang Su, Ye Chen, and **H. Q. Yuan***, Nodeless superconductivity in β-PdBi₂, *Phys. Rev. B* **101**, 054514 (2020).
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58. Y. P. Liu, Y. J. Zhang, J. J. Dong, H. Lee, Z. X. Wei, W. L. Zhang, C. Y. Chen, **H. Q. Yuan**, Yi-feng Yang and J. Qi, Hybridization dynamics revealed by ultrafast optical spectroscopy in CeCoIn₅, *Phys. Rev. Lett.* **124**, 057404 (2020).
59. Y. J. Zhang, B. Shen, F. Du, Y. Chen, J. Y. Liu, Hanoh Lee, M. Smidman, and **H. Q. Yuan**, Structural and magnetic properties of antiferromagnetic Ce₂IrGa₁₂, *Phys. Rev. B* **101**, 024421 (2020).
60. Peng Li, Zhongzheng Wu, Fan Wu, Chunyu Guo, Yi Liu, Haijiang Liu, Zhe Sun, Ming Shi, Fanny Rodolakis, Jessica L. McChesney, Chao Cao, **Huiqiu Yuan***, Frank Steglich, and Yang Liu*, Large Fermi surface expansion through anisotropic mixing of conduction and f electrons in the semimetallic Kondo lattice CeBi, *Phys. Rev. B* **100**, 155110 (2019).
61. Xie Wu, Shen Bin, Zhang Yong-Jun, Guo Chun-Yu, Xu Jia-Cheng, Lu Xin, Yuan Hui-Qiu*, Heavy fermion materials and physics, *Acta Physica Sinica* **68**, 177101 (2019). (Invited review).
62. T Shang, A Amon, D Kasinathan, W Xie, M Bobnar, Y Chen, A Wang, M Shi, M Medarde, **H Q Yuan** and T Shiroka, Enhanced T_c and multiband superconductivity in the fully-gapped ReBe₂₂ superconductor, *New J. Phys.* **21** 073034 (2019).
63. F. Wu, C.Y. Guo, M. Smidman, J. L. Zhang, Y. Chen, J. Singleton and **H. Q. Yuan***, Anomalous quantum oscillations and evidence for a non-trivial Berry phase in SmSb, *npj Quantum Materials* **4**:20 (2019).
64. F. Wu, C. Y. Guo, Y. Chen, H. Su, A. Wang, M. Smidman, and **H. Q. Yuan***, Magnetic field induced antiferromagnetic tricritical points in Ce₂Sb and Ce₂Bi, *Phys. Rev. B* **99**, 064419 (2019).
65. M Smidman, B Shen, C Y Guo, L Jiao, X Lu, **H Q Yuan***, Heavy fermions in high magnetic fields, *Chin. Phys. B* **28**, 017106 (2019) (invited review).
66. Z. Z. Wu, F. Wu, P. Li, C. Y. Guo, Y. Liu, Z. Sun, C. W. Cheng, T. C. Chiang, C. Cao, **H. Q. Yuan***, and Y. Liu*, Probing the origin of extreme magnetoresistance in Pr/Sm mono-antimonides/bismuthides, *Phys. Rev. B* **99**, 035158 (2019).
67. L. Jiao, M. Smidman, Y. Kohama, Z. S. Wang, D. Graf, Z. F. Weng, Y. J. Zhang, A. Matsuo, E. D. Bauer, Hanoh Lee, S. Kirchner, J. Singleton, K. Kindo, J. Wosnitza, F. Steglich, J. D. Thompson, and **H. Q. Yuan***, Enhancement of the effective mass at high magnetic fields in CeRhIn₅, *Phys. Rev. B* **99**, 045127 (2019).
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- superconductivity and heavy-fermion quantum criticality: CeCu₂Si₂ versus YbRh₂Si₂, *Phil. Mag.* **98**, 2930 (2018).
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