贾爽

学历:博士　工作单位：北京大学　职称：教授　方向：凝聚态物理

学术背景：

2023-　　教授，　北京大学
2018-2022　长聘副教授，　北京大学
2012-2018　预聘副教授，　北京大学
2008-2012 年　博士后，　美国普林斯顿大学，　导师：Robert J. Cava
2002-2008 年　物理博士，　美国爱荷华州立大学，　导师：Paul C. Canfield
1996-2000 年　物理学士，　北京大学

研究方向：

探索和合成新型体材料，包括强关联电子系统，拓扑绝缘体和新型热电材料。近年来从事拓扑半金属、金属材料生长和电子性质表征工作。

代表性成果及贡献简述：

- 博士研究生阶段主要从事稀土金属间化合物的电子性质研究，相继发现了包括高温铁磁，近铁磁的强关联系统，重费米子等一系列特异的电子现象。这一系列工作相继发表在 *Nature Physics, Proceeding of the National Academy of Sciences (USA), Physical Review B* 等具有影响力的杂志上，推动了大量的后续实验和理论研究。
- 博士后阶段工作集中在 $ThCr_2Si_2$ 结构化合物的结构相变与磁性质的研究上。结合固体化学和凝聚态物理的研究方法，我对于此一类化合物的结构相变与电子性质的关系进行了探索性的研究，首次发现了包括由化学键断裂导致的量子相变等一系列奇异的物理现象。这些工作相继发表在 *Nature Physics, Physical Review B* 等杂志上。
- 从 2010 年底至今，工作集中在拓扑绝缘体材料和拓扑半金属的研究上，作为第一作者和合作作者先后在 *Nature*，*Nature Materials, Science, Nature Physics, Physical Review B* 等刊物发表文章，涉及新型的拓扑绝缘体材料和量子相变；外尔半金属和狄拉克半金属，陈数笼目磁体等。

部分教学及授课情况：

- 《普通物理 II》，2021-2022 秋季，2 学期，8 学时
- 《普通物理 1 讨论班》，2020-2022 春季，3 学期，6 学时
- 《普通物理 2 讨论班》，2020-2021 春季，2 学期，4 学时
- 《普通物理实验》，共 9 学期，52 学时

部分学术会议邀请报告：

- “Weyl Semimetal TaAs family: Chiral Anomaly and Other Transport Properties” APS March Meeting 2017

- “Phase Transition in Weyl Semimetal TaP in an Intense Magnetic Field” HMF22, July, 2016
- “Transport and thermoelectric properties of Bi_2Te_2Se” IUMRS 12th International Conference on Advanced Materials, September, 2013
- “Dimer breaking and electronic correlation in $ThCr_2Si_2$ structure compounds” 17th International Conference on Crystal Growth, Monterey, August 1-5, 2011
- “Growth and characterization of RT_2Zn_{20} family of dilute, rare earth bearing intermetallics: from Stoner limit to heavy Fermion” 15th International Conference on Crystal Growth, Salt Lake City, August 12-17, 2007

部分发表论文：

- Zi-Jia Cheng, Ilya Belopolski, Tyler A. Cochran, Hung-Ju Tien, Xian P. Yang, Wenlong Ma, Jia-Xin Yin, Junyi Zhang, Chris Jozwiak, Aaron Bostwick, Eli Rotenberg, Guangming Cheng, Md. Shafayat Hossain, Qi Zhang, Nana Shumiya, Daniel Multer, Maksim Litskevich, Yuxiao Jiang, Nan Yao, Biao Lian, Guoqing Chang, **Shuang Jia**, TayRong Chang,and M. Zahid Hasan, “Magnetization-direction-tunable kagome Weyl line",arXiv:2203.10648.
- Makars Si˘skins, Samer Kurdi, Martin Lee, Benjamin J. M. Slotboom, Wenyu Xing, Samuel ˇMa¯nas-Valero, Eugenio Coronado, **Shuang Jia**, Wei Han, Toeno van der Sar, Herre S. J.van der Zant and Peter G. Steeneken, “Nanomechanical probing and strain tuning of the Curie temperature in suspended Cr2Ge2Te6-based heterostructures", npj 2D Mater Appl **6**, 41 (2022).
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- Wenlong Ma, Xitong Xu, Jia-Xin Yin, Hui Yang, Huibin Zhou, Zi-Jia Cheng, Yuqing Huang, Zhe Qu, Fa Wang, M. Zahid Hasan, and **Shuang Jia**, “Rare Earth Engineering in RMn6Sn6 (R=Gd-Tm, Lu) Topological Kagome Magnets", Phys. Rev. Lett. **126**, 246602 (2021).
- Daniel S. Sanchez, Tyler A. Cochran, Ilya Belopolski, Zi-Jia Cheng, Xian P. Yang, Yiyuan Liu, Xitong Xu, Kaustuv Manna, Jia-Xin Yin, Horst Borrmann, Alla Chikina, Jonathan Denlinger, Vladimir N. Strocov, Claudia Felser, **Shuang Jia**, Guoqing Chang, and M. Zahid

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- 科技部 973 2013CB921901 《新型量子材料中电子内禀自由度的调控》， 2013-2018 年度，学术骨干，经费：240 万元
- 科技部 973 2014CB239302 《表/界面调控及光化学机制的先进表征和理论研究》，2014-2019 年度，第二课题组负责人，经费：527 万元
- 国家自然科学基金面上项目 《新型磁性半金属单晶材料的反常霍尔效应》，2018/01-2021/12 经费：67 万元
- 科技部国家重点研发计划 2018YFA0305601, 《拓扑超导等关联体系的量子态——拓扑超导等关联体系的制备与调控》, 2018-05 至 2023-04，学术骨干 441 万元
- 国家自然科学基金专项项目 12141002, 《量子材料先进固态制冷探索》，2022-01-01 至 2025-12-31，学术骨干，经费：500 万元
- 科技部国家重点研发计划，2021YFA1401902《无 He-3 极低温制冷机和非常规量子物态调控技术的研发和应用-极低温物态调控技术开发》， 2022 年 1 月--2026 年 12 月，课题负责人，经费：437 万元
- 国家自然科学基金杰出青年项目 12225401《新拓扑物态的发现和表征》，2023-2028，经费：400 万元

荣誉与获奖情况：

- 审稿人：Physical Review Letter, Physical Review B, Nature Communication, Nature Physics, Nature Materials

- 主持学术会议： *Strongly correlated electron system session in 17th International Conference on Crystal Growth* , Monterey, August 1-5, 2011
- 2012 入选中组部第二批青年千人计划