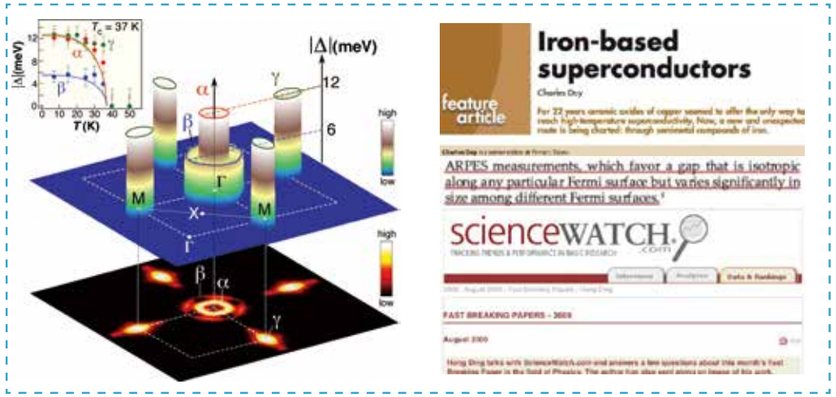
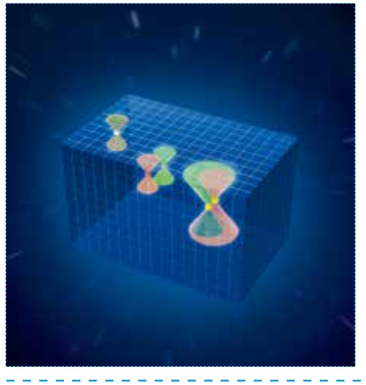
Hong Ding, Institute of Physics, Chinese Academy of Sciences

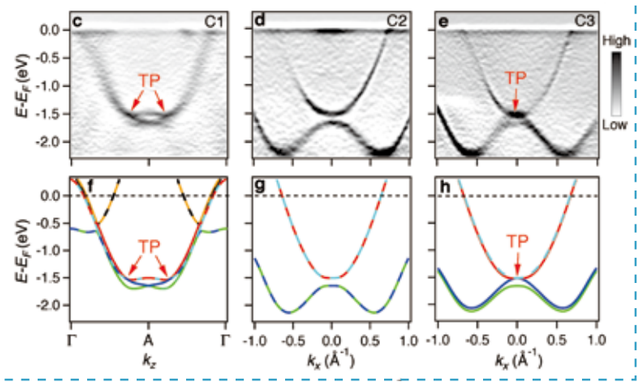
上海光源“梦之线”
“Dreamline” in Shanghai Synchrotron Radiation Facility

Professor Hong Ding has been doing research work in experimental condensed matter physics for more than 25 years, mainly studying electronic structure and physical mechanism of topological materials and high temperature superconductors. He has made several pioneering discoveries with major impact to the field, including experimental discovery of Weyl fermion in solid materials, discovery of superconducting topological surface state and Majonara zero mode in iron-based superconductors, measurement of superconducting order parameter in iron-based superconductors, and experimental discovery of three-component fermion. The “discovery of Weyl fermion in a solid” has been selected by American Physical Society as one of 49 pieces of milestone work for the 125th anniversary of Physical Review Journals. His achievements have been selected as Top Ten Scientific Advancements in China of Years or Top Ten News of Science and technology in China of Year during 2015, 2017 and 2018. He has led a team in successful construction of a world-class beamline (“Dreamline”) in Shanghai Synchrotron Radiation Facility, producing several important discoveries.



铁基超导体超导序参量的测量
Measurement of superconducting order parameter in iron-based superconductors





三重简并费米子的实验发现
Discovery of three-component fermion

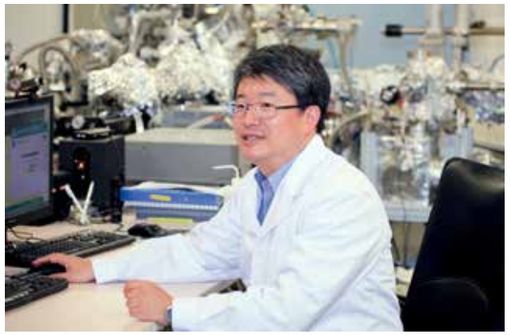
丁　洪
Ding Hong

丁　洪

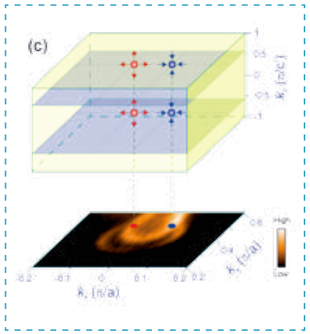
推荐单位：中国科学院物理研究所

主要科技贡献：

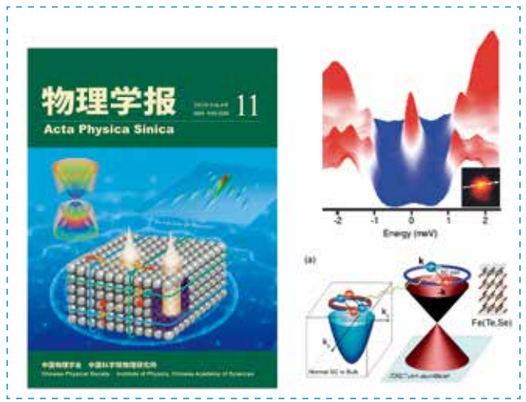
丁洪研究员长期从事凝聚态物理实验研究，主要研究拓扑材料和高温超导体的电子结构和物理机理。在固体材料中外尔费米子实验发现、铁基超导体中超导拓扑表面态和马约拉纳零能模发现、铁基超导体的超导序参量测量、三重简并费米子实验发现中做出了具有重大国际影响力的开创性工作。“固体中发现外尔费米子”文章入选美国物理学会系列期刊诞生 125 周年纪念论文集。研究成果分别入选 2015 年、2017 年中国科学十大进展和 2018 年中国十大科技进展新闻。他在上海光源负责建成一条多项技术指标世界领先的光束线站（“梦之线”），并取得重大科研成果。



丁洪在实验室
Ding Hong in the laboratory



固体中外尔费米子的实验发现
Experimental discovery of Weyl fermion in solids



铁基超导体中超导拓扑表面态和马约拉纳零能模的发现
Discovery of superconducting topological surface state and Majorana zero mode in iron-based superconductors

实验发现外尔费米子的评价
Evaluation for the discovery of Weyl fermion