



# Topological Superconductivity: *Theories and Realizations*

Exhibition Hall on the 1<sup>st</sup> floor of HFNL, June 2, 2017  
(2017年6月2日 理化大楼一楼科技展厅)

Co-Chairs: Zhenyu Zhang & Xianhui Chen (USTC)

Co-Sponsors:

International Center for Quantum Design of Functional Materials (ICQD)

CAS Key Laboratory of Strongly-Coupled Quantum Matter Physics

- 8:30-8:40 Zhenyu Zhang (USTC)  
Opening & Welcome Remarks
- Chair: Bing Wang (USTC)
- 8:40-9:10 Jinfeng Jia (Shanghai Jiaotong University)  
Topological superconductor by proximity effect
- 9:10-9:40 Fuchun Zhang (University of Chinese Academy of Sciences)  
Theory for spin dependent tunneling conductance in vortex of topological superconductors
- 9:40-10:10 Li Lv (Institute of Physics, CAS)  
Search for Majorana zero modes in rf-SQUIDs constructed on Bi<sub>2</sub>Se<sub>3</sub> surface
- 10:10-10:30 Photo time & Coffee/Tea Break
- Chair: Xingao Gong (Fudan University)
- 10:30-11:00 Jiangping Hu (Institute of Physics, CAS)  
Topological physics in iron-based superconductors
- 11:00-11:30 Yijie Sun & Hong Ding (Institute of Physics, CAS)  
ARPES studies of Fe-based topological superconductors
- 11:30-12:00 Zhenyu Zhang (USTC)  
Defect-induced topological phase transitions in 2D superconductors
- 12:00-14:30 Lunch
- Chair: Jiangping Hu (Institute of Physics, CAS)
- 14:30-15:00 Feng Liu (University of Utah, USA)  
Topological edge states in high-temperature superconductor FeSe/SrTiO<sub>3</sub>(001) film
- 15:00-15:30 Canli Song & Qikun Xue (Tsinghua University)  
Beta-Bi<sub>2</sub>Pd as topological superconductors
- 15:30-16:00 Xiangang Wan (Nanjing University)  
Realization of massive relativistic spin-3/2 Rarita-Schwinger quasiparticle in condensed matter systems
- 16:00-16:20 Coffee/Tea Break
- Chair: Feng Liu (University of Utah, USA)
- 16:20-16:50 Jianxin Li (Nanjing University)  
Minimum spin model evidencing the Kitaev interaction in alpha-RuCl<sub>3</sub>
- 16:50-17:20 Xianhui Chen (USTC)  
Gate-induced superconductivity in topological insulator Bi<sub>2</sub>Se<sub>3</sub>
- 17:20-17:50 Xincheng Xie (Peking University)  
Discrete scale invariance and Efimov physics in Weyl semimetals
- 17:50-18:00 Xianhui Chen (USTC)  
Concluding Remarks