北京大学量子材料科学中心

International Center for Quantum Materials, PKU

Seminar Superconducting States in Doped Topological Materials

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Time: 4:00pm, <u>Nov. 20. 2014 (Thursdav)</u> 时间: 2014年11月20日 (周四) 下午4:00 Venue: Conference Room 607, Science Building 5 地点: 理科五号楼607会议室

Abstract

There are considerable interests in topological superconductivity in condensed matter physics. In this talk, I will present our recent works on topological superconductors and the related phenomena. In particular, I will discuss how topological non-trivial structures in normal states may arise non-trivial quantum phenomena in the superconducting states. As examples, I will **discuss** odd parity superconductors [1], superconducting states in Cu-doped Bi2Se3[2, 3], and doped Weyl semi-metal[4]. In the latter two cases, I will show that topological surface states in the normal states give rise to novel topological quantum phenomena in superconducting states.

[1 M. Sato, Phys. Rev. B81, 220504(R) (2010)

- A. Yamakage, K. Yada, M. Sato, Y. Tanaka, Phys. Rev. B85, 180509(R)
- T. Mizushima, A. Yamakage,