北京大学量子材料科学中心

International Center for Quantum Materials, PKU

Weekly Seminar

Experimental realization of Lorentz violating type-II Weyl semimetal in $MoTe_2$

Shuyun Zhou

Department of Physics, Tsinghua University

Time: 4:00pm, May 11, 2016 (Wednesday)

2016 5 11 4:00

Venue: Room w563, Physics Building, Peking University

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Abstract

Weyl semimetal is a novel quantum state of matter hosting relativistic Weyl fermion originally introduced in high energy physics. Recently a new type of (type-II) Weyl fermion, which does not have counterpart in high energy physics due to the violation of Lorentz invariance, has been proposed to emerge as topologically-protected touch between electron and hole pockets. In this talk, I will present direct experimental evidences on the Fermi arcs in $MoTe_2$ from angle-resolved photoemission spectroscopy and scanning tunneling spectroscopy, establishing it as a type-II Weyl semimetal.

References:

Ke Deng et al, observation of topological Fermi arcs in type-II Weyl semimetal $MoTe_2$ arXiv:1603.08508.

About the speaker

2002 2007 2008-2012

2012

2013

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30 Nature, Nature Materials, Nature Physics, Phys. Rev. Lett. 13 3000