中心系列讲座 ICQM Weekly Seminar Series

"STM Study of Topological Insulators Grown by MBE"

Prof. Xi Chen
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Time: 4:00pm, Mar. 9, 2011 (Wednesday)
2011 3 9 4:00
Venue: Room 607, Conference Room A , Science Building 5
607

Abstract

I will summarize our recent activity in the molecular beam epitaxy (MBE) growth and characterization of the nontrivial surface states of topological insulator films of Bi_2Te_3 and Bi_2Se_3. We demonstrate the atomically flat morphology and intrinsic topological property of the resulted films by angle resolved photoemission spectroscopy (ARPES) and scanning tunneling microscopy/spectroscopy (STM/STS). By direct imaging standing waves associated with nonmagnetic impurities and steps on Bi_2Te_3 and Bi_2Se_3 (111) surfaces, we show that the topological states have a surface nature and are protected by the time reversal symmetry. The Dirac cone structure is also indicated by the Landau quantization of the topological states in high magnetic field.

About the Speaker

1993 1996 2004 Cornell
2004 2006 Irvine 2006 2010
2011

All are welcome. Light refreshments served.