



# 北京大学量子材料科学中心

## International Center for Quantum Materials, PKU

### Seminar

#### Ultrafast carrier, phonon and spin dynamics in topological insulators

**Time:** 4:00pm, April 22, 2015 (Wednesday)

**时间:** 2015年04月22日 (周三) 下午4:00

**Venue:** Room W563, Physics Building, Peking University

**地点:** 北京大学物理楼 西563

#### Abstract

Understanding carrier, phonon and spin dynamics is essential for future optoelectronic and spintronic applications of topological insulators. Here, I will present a systematic study of those dynamics in Bi<sub>2</sub>Se<sub>3</sub> and Bi<sub>2</sub>Se<sub>3.9</sub> investigated by ultrafast pump probe spectroscopy. Several detailed temperature-dependent relaxation processes are given. Some new observed phenomena may tell us more information about this type of material, i.e. electron-phonon scattering anisotropy, charge transport time, electronic structure.

#### About the Speaker

Vanderbilt

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Los Alamos