



## Seminar

# Novel thermal effects of quantum nanomaterials

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**时间:** 2014年12月30日 (周二) 下午 4:00

**Venue:** Conference Room A (607), No. 5 Science Building

**地点:** 理科五号楼607会议室

### Abstract

In solid materials heat is carried by both lattice vibration (phonons) and mobile charges (electrons or holes). The relative contribution and interplay of these heat carriers have profound implications to the physics of condensed matter as well as its applications in energy technologies. Unlike electronic-magnetic and optical properties of solid materials, thermal and thermoelectric effects are more challenging to characterize, and often overlooked in investigation of materials physics. In this talk I will discuss our recent efforts in exploring exotic thermal and thermoelectric effects in quantum nanomaterials: 1) violation of the Wiedemann-Franz law in the strongly correlated electron material vanadium dioxide, where