



中心系列讲座 ICQM Weekly Seminar Series

“ARPES measurements of superconducting gap of iron-based superconductors – a path towards a unified paradigm of high-T_c superconductivity”



Prof. Hong Ding 丁洪
Institute of Physics,
Chinese Academy of Sciences

Time: 4:00pm, June. 15, 2011 (Wednesday)

时间: 2011年6月15日 (周三) 下午4:00

Venue: Room 607, Conference Room A, Science Building 5

地点: 理科五号楼607会议室

Abstract

In this talk, I will present our angle-resolved photoemission spectroscopy (ARPES) results on iron-based superconductors, mainly focus on high-resolution measurements of their superconducting gaps. All gaps observed can be well described simple local pairing functions, which can be fully determined by local antiferromagnetic (AF) exchange interactions and Fermi surface (FS) topology. We argue the same is true for the high-T_cCuO-based superconductors, whose high critical temperatures and d-wave gap function are also the consequences of their large nearest-neighboring AF superexchange and FS topology. Thus we believe that strong local AF exchanges and collaborative FS topology is a possible unified paradigm of high-T_c superconductivity.

About the Speaker

丁洪博士，现为中国科学院物理所研究员，北京凝聚态国家实验室首席科学家。1990年毕业于上海交通大学，于1995年获美国University of Illinois at Chicago的物理博士。1995年9月至1998年8月在美国Argonne国家实验室作博士后。1998年9月至2008年5月在美国Boston College大学物理系历任助理教授、副教授、正教授。主要用角分辨光电子能谱研究高温超导体的电子结构和超导机理。近年来在国际重要学术杂志上发表了100多篇学术论文，总引用数超过6000次。1999年获美国斯隆奖，2008年入选首批国家“千人计划”，2011年被选为美国物理学会会士。