International Center for Quantum Materials, PKU

Weekly Seminar

Advances in ARPES Study of High Temperature Superconductors

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Time: 4:00pm, April. 9, 2014 (Wednesday)
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Venue: Room 607, Science Building 5
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Abstract

Understanding the mechanism of high temperature superconductivity as in copper-based compounds discovered in 1986 and iron-based compounds discovered in 2008 is a prominent and challenging issue in condensed matter physics. Angle-Resolved photoemission spectroscopy (ARPES), as a powerful technique to directly probe the electronic structure of materials, has played a key role in studying high temperature superconductors. In this talk, I will first introduce the principle, history and present status of photoemission techniques, particularly the latest development of laser-based angle-resolved photoemission spectroscopy (ARPES) which has unique advantages such as super-high energy resolution. I will then highlight some recent advances in utilizing the state-of-the-art ARPES in studying copper- and iron-based high temperature superconductors.

About the Speaker

周兴江，1988年清华大学化学与化学工程系学士、1990年清华大学材料科学与工程系硕士，1994年中国科学院物理研究所获凝聚态物理理学博士。1995-1997年德国Stuttgart马普固体研究所洪堡学者，1997-2006年为美国斯坦福大学物理学者兼美国劳仑斯Berkeley国家实验室先进光源束线科学家。现为中国科学院物理研究所研究员、博士生导师，超导国家重点实验室主任。

周兴江博士利用我国的自主核心技术,主持研制了系列真空紫外激光角分辨光电子能谱仪，性能国际领先。已发表学术论文120余篇，其中包括Science 3篇，Nature 4篇，Nature Materials 1篇，Nature Communications 3篇，PNAS 1篇，Physical Review Letters 20多篇，论文被它引4600次以上。 2003年获美国劳伦斯Berkeley 国家实验室先进光源的“David A. Shirley杰出科学成就”奖，2004年入选中科院“