



### Seminar

**The nature of charge density waves in cuprate high- $T_c$  superconductors: an X-ray perspective**

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**Time: 10:00am, July 20, 2017 (Thursday)**

**时间: 2017年7月20日 (周四) 上午10:00**

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

**地点: 北京大学物理楼, 西563会议室**

#### Abstract

Charge density wave (CDW) order has now been established in the low-temperature phase of essentially all families of underdoped cuprates sparking considerable debate about the relationship between the charge, spin and superconducting correlations and the universality or otherwise of the CDW properties of different cuprates. Benefit from the new generation of synchrotron light source and free electron laser, high brilliant and fully coherent X-ray scatterings are available to directly study the lattice, charge and spin correlation functions with unprecedented efficiency and accuracy. In the talk, I show how we use state-of-the-art X-ray scattering techniques, including resonant/non-resonant inelastic X-ray scattering (RIXS/IXS) and X-ray photon correlation spectroscopy (XPCS), to reveal the nature of charge density waves in underdoped cuprate.

#### About the speaker

苗虎, 2015年博士毕业于中国科学院物理研究所,之后加入美国布鲁克海文国家实验室做博士后研究员。目前主要研究方向为利用X射线散射(RIXS / IXS / REXS / XPCS)研究非常规超导材料的电荷/磁激发及超导的配对机制。其主要工作发表在Nature communications, Physical Review Letter, Physical Review X等国际期刊。