



Seminar

IR and THz near-field nano-imaging and nano-spectroscopy

Prof. Mengkun Liu

Stony Brook University, US

Time: 10: 30 Am, Jan 24, 2019 (Thursday)

时间: 2019年1月24日 (周四) 上午10:30

Venue: Room W563, Physics building, Peking University

地点: 北京大学物理楼, 西563会议室

Abstract

Over the past decade, optical near-field techniques, especially the scattering-type scanning near-field optical microscope (s-SNOM), have undergone tremendous development. This is partly due to the ever-increasing demand for the exploration of the nano-world and partly due to the many technical advances in laser and scanning probe technologies. I will use this opportunity to report the recent advances in the IR and THz near-field microscopy and spectroscopy technology and discuss their applications in complex materials. I will also discuss the future development of near-field scanning microscope including the cryogenic capabilities and its coupling to ultrafast pump-probe spectroscopy including both IR and THz frequency range. These new developments set the stage for future spectroscopic investigations to access the fundamental properties of complex materials at the nanoscale.

About the speaker

Mengkun Liu (Ph.D. 2012 Boston University) is an assistant professor at the Physics Department of Stony Brook University (since Jan. 2015). His post doc research is at UC San Diego from 2012-2014. His research interests include physics of correlated electron systems, two-dimensional materials, infrared and terahertz nano-optics and ultrafast time-domain spectroscopy. Prizes include Seaborg Institute Research Fellowships at Los Alamos National Lab (2009, 2010).