北京大学量子材料科学中心
International Center for Quantum Materials, PKU

Weekly Seminar

扫描近场光学显微技术及其在凝聚态物理中的应用

史志文

上海交通大学物理与天文学院

Time: 3:00pm, Nov. 23, 2022 (Wednesday)

时间：2022年11月23日 （周三）下午3:00

腾讯会议链接: https://meeting.tencent.com/dm/M7aTPnpzOGcT

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摘要

Scanning near-field optical microscopy (SNOM), is a microscopy technique for nanostructure investigation that breaks the far field optical resolution limit by exploiting the properties of evanescent waves. Basically, it is a combination of laser and atomic force microscope (AFM), where light is focused onto the apex of a metal-coated AFM tip. The near-field at the tip apex is strongly enhanced, leading to a strong local interaction of light with material underneath the tip. Optical image and spectroscopy with spatial resolution of ~10nm can be achieved, providing the capability to explore light-matter interaction at nanometer scale. In this talk, I will first briefly introduce the SNOM technique, and then talk about a few examples of exploring novel optical phenomena in low-dimensional materials with SNOM.

个人简介

史志文，上海交通大学物理与天文学院长聘副教授。2012年于中科院物理研究所获物理学博士学位；随后在美国加州大学伯克利分校从事博士后研究；2016年加入上海交通大学物理与天文学院。入选海外高层次人才计划（青年项目）,上海市“千人计划”专家，上海市“东方学者”。主要关注低维纳米材料中的光物理现象，运用自主搭建的扫描近场光学显微镜，突破光学衍射极限在纳米尺度上研究光与物质的相互作用。已在Nature、Nature 子刊、Advanced Materials、Nano Letters等刊物上发表学术论文70余篇，总引用7000余次。详见研究组网页：https://zhiwen.sjtu.edu.cn