



### Seminar

#### Nonlinear optics in flatland

吴施伟

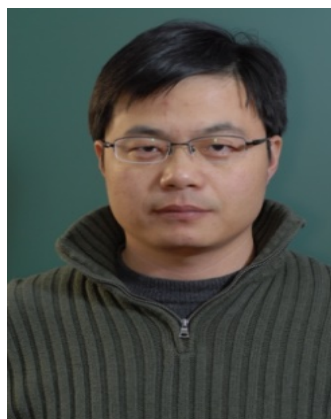
复旦大学物理系

**Time: 10:30am, May 21, 2019 (Tuesday)**

**时间: 2019年5月21日 (周二) 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

Atomically thin two dimensional materials have recently spurred a great of interests due to their unique mechanic, electronic, optical and magnetic properties. And often these properties could be greatly tuned by external stimuli such as electric, magnetic and force fields. Individual member in this class of 2D materials is characteristic in term of structural symmetry. Moreover, the structural symmetry could also be tuned, depending on how monolayers are stacked on one another. These variations in symmetry have given rise to even richer properties among different 2D materials and their homo-/hetero-structures. Therefore, they provide a new playground for nonlinear optics because of its sensitivity to symmetry. Vice versa, nonlinear optics becomes a powerful technique to study 2D materials. In this talk, I will present some of our recent results on nonlinear optical microscopy and spectroscopy of 2D materials, including graphene, transition metal dichalcogenides and chromium triiodes.

#### About the speaker

吴施伟, 复旦大学物理系教授。研究方向是低维量子体系的光物理, 致力于发展自主创新的实验研究方法, 以探索时间、空间分辨极限下的光物理现象与机制, 解决与凝聚态物理、材料科学、纳米科技等领域相关的基础科学问题。近五年, 吴施伟教授在复旦大学主持研制了和光耦合的无液氦低温扫描隧道显微镜、低温强磁场超快非线性光学显微装置等特色实验平台, 并在二维量子材料的非线性光学响应、缺陷结构和物性等方面取得了一定的成果。这些研究成果以通讯作者在Nature、Nature Photonics、Nature Nanotechnology、Science Advances、PRL等期刊发表,并申请国家发明专利5项(其中2项已授权), 国际专利3项。吴施伟教授曾入选教育部青年长江学者, 主持科技部重大研究计划的青年科学家专题项目, 并且是基金委重大仪器研制专项(部委推荐项目)的核心骨干。