

Seminar

Graphene: Plays More Than One Tune

Time: 4:00 Pm, Jan. 15, 2020 (Wednesday)

2020 1 15 4:00

Venue: Room W563, Physics building, Peking University

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2D material is a highly tunable system that provides the opportunity to design, create and study different physics for purpose. In this talk, I will take graphene as an example to show how we tune the electronic properties of graphene and study different physics varying from single-particle physics, to strongly correlated physics and topological physics. In particular, I will start from the band engineering of graphene on hBN moire superlattice[1]. Then I will discuss a general route to engineer strongly correlated physics in two-dimensional moir é superlattices, and show the experimental realization of a tunable Mott insulator in the ABC stacked trilayer graphene (TLG)/hBN moir é superlattice[2]. The moir é superlattice in TLG/hBN heterostructures leads to narrow electronic minibands and allows for the observation of